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Interest Centering on New Crude Prices

INTEREST centered largely this week on the announcement by the Continental Oil Company that it would advance its prices for crude January 4. Whether major buyers generally would meet the Continental's new prices, as three companies already have announced they will do, was a matter of conjecture. President Dan Moran's assertion that "producers must have higher allowables or higher prices" formed the core of his explanation of Continental's action, and he referred to a war among producers as imminent "unless fair recognition is given their continued adherence to reduced allowables in isolated fields where special treatment will be required to perpetuate the balance that must be maintained among producing states and the law of supply and demand." Preponderance of opinion was that other large purchasers of crude would avoid haste in deciding what course to adopt.

Daily average production of crude showed another drop in the week ending December 5. The decrease of 20,413 barrels was accounted for in Oklahoma, where the output was 39,000 barrels less than in the preceding week. Texas was up 19,000 barrels. The meeting of the Oklahoma Corporation Commission scheduled for Friday of this week was awaited to indicate what policy will be pursued in that state with reference to the recommendations of the Bureau of Mines. The Texas Railroad Commission already has set its December daily allowable for the state 56,270 barrels, or about 5 per cent higher than the figure recommended by the bureau. Kansas thereupon fixed its state allowable about 5 per cent higher than the bureau's recommendation. The Oklahoma regulatory body is expected to do the same thing. If this expectation is fulfilled, not one of the more important oil-producing states east of the Rocky Mountains will have its production adjusted to the crude requirements as estimated by the Bureau of Mines. What the eventual outcome of thus ignoring the bureau's recommendations may be is becoming a subject of grave discussion.

Production 2,989,173

Decrease 20,413

In the marketing division the burning oils continued to hold their position as the strongest group. Predictions are made freely that if weather conditions prove to be similar to those of last year, an acute shortage of this class of material will be witnessed. Already some refiners, who emphasized manufacture of special tractor distillates instead of building up their stocks of burning oils last summer, find themselves unable to meet the urgent demand for heating oils created by freezing temperatures in the northers areas.

The market performance of the whole list of petroleum products is tied up with the uncertainties involved in the future of crude prices. No clear reaction to the prospective advances was observable in the tankcar markets.

Daily Average Production for Week

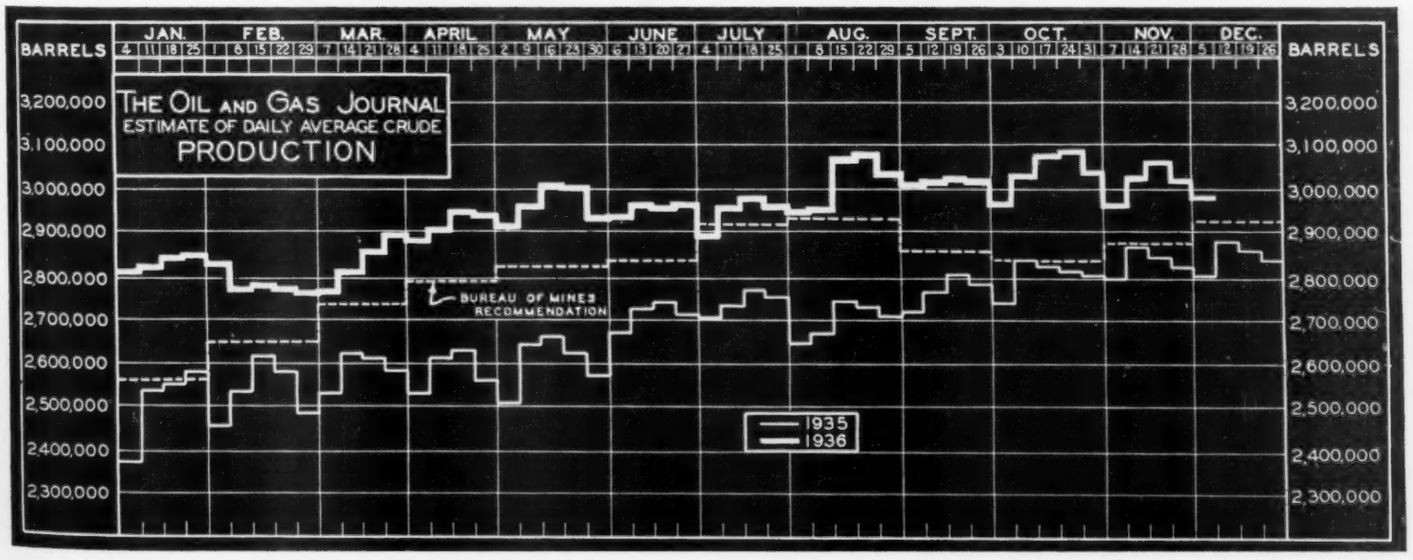
	Dec. 5, 1936	Bur. Mines Dec. est.	Dec. state allowable	Nov. 28, 1936
Oklahoma City	113,575	.....	.....	143,475
Seminole-St. Louis	91,250	.....	.....	92,850
Remainder of State	324,275	.....	.....	331,800
Total Oklahoma	529,100	567,000	567,000	568,125
East Texas	450,000	.....	.....	449,150
West Texas	169,650	.....	.....	162,594
North Central Texas	87,300	.....	.....	88,197
Texas Panhandle	62,048	.....	.....	63,448
East Central Texas	83,900	.....	.....	76,944
Gulf Coast—Texas	241,350	.....	.....	236,050
Southwest Texas	87,597	.....	.....	86,250
Total State of Texas	1,181,845	1,145,200	1,201,470	1,162,633
North Louisiana	79,695	.....	.....	77,510
Gulf Coast—Louisiana	159,296	.....	.....	157,897
Total Louisiana	238,991	204,800	238,350	235,407
Santa Fe Springs	44,200	.....	.....	44,150
Long Beach	65,000	.....	.....	64,750
Kettleman Hills	76,100	.....	.....	76,600
Remainder of State	385,700	.....	.....	381,700
Total California	571,000	553,400	*551,000	567,200
Kansas	160,200	155,900	163,225	165,400
Arkansas	27,720	26,800	.....	27,820
Eastern Fields	113,400	110,600	.....	114,000
Michigan	29,697	29,300	.....	29,761
Southeastern New Mexico	74,290	77,270	85,155	74,290
Rocky Mountain area	62,930	60,030	.....	64,950
Total United States	2,989,173	2,930,300	.....	3,009,586

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATE)

Week ending November 21, 1936	289,454,000
Week ending November 14, 1936	289,964,000
Week ending November 23, 1935	316,035,000



SPARKS FROM THE NEWS

Difference

Estimated cash dividends of $239,000,627 this year by Standard group compares with $128,938,375 in 1933.

False Economy?

Reducing crude stocks to the most economical limit might prove to be pennywise and pound-foolish.

Going Up

Air passenger lists and airmail poundage continue to grow and are calling for more and more high octane gasoline.

Santa Claus Comeback

This Christmas will occasion the highest consumption of paraffin candles the industry has known.

New Job

California injunction for alleged violation of Fair Trade Practice Act may force station owners to take time out to find out what it really costs to distribute gasoline.

Oversight

Wildcatters find little encouragement in the fact that it took 50 years to find the new oil pool in Greene County, Pennsylvania.

Honors Easy

The Madison indictees charged with irregularities in the conduct of their marketing operations return compliment and allege empaneling of grand jury was irregular.

Model

Kansas' contribution to unusual developments is the seven-year-old Wellington pool with no dry holes and all wells flowing.

Nick of Time

A Canadian operator gets in ahead of the winter shutdown with an important extension to Turner Valley.

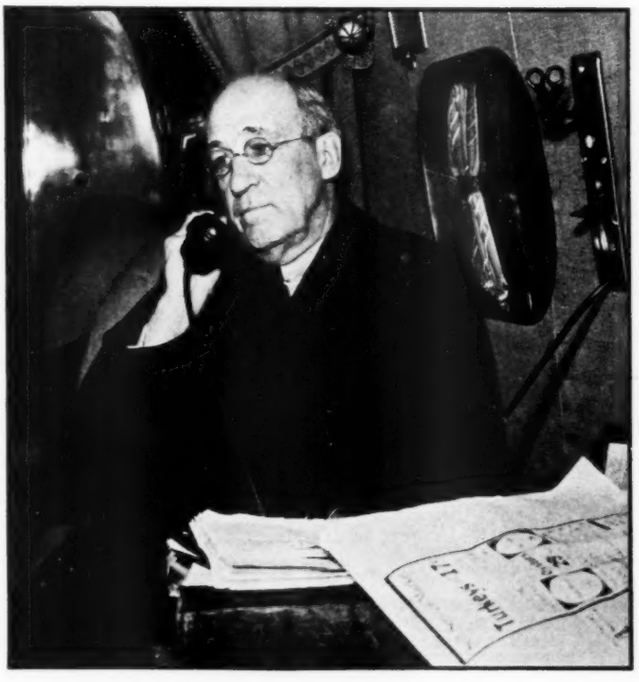
Inside Information

A small refiner with 24 hours' supply of crude on hand is not participating in the current arguments regarding economic storage minimums. He knows.

Contrast

Thirty days' notice on crude advance contrasts with the 7 o'clock announcements with which the industry has been familiar for many years.

A VOICE FROM THE SKY



Frank Phillips phoning from his plane, traveling 200 miles an hour, 8,000 feet up, first airplane long-distance telephone communication—between Joplin, Mo., and Chicago.—(Courtesy St. Louis Globe Democrat)

Roundup

Merger of Richfield-Rio Grande-Pan American gives West Coast another well-rounded major unit.

No Escape

The fact that the "life expectancy" of a car has been increased to 8.4 years is important to gasoline sellers; also, unfortunately, to tax collectors.

Crude Stocks Are Nearing a Bare Working Margin

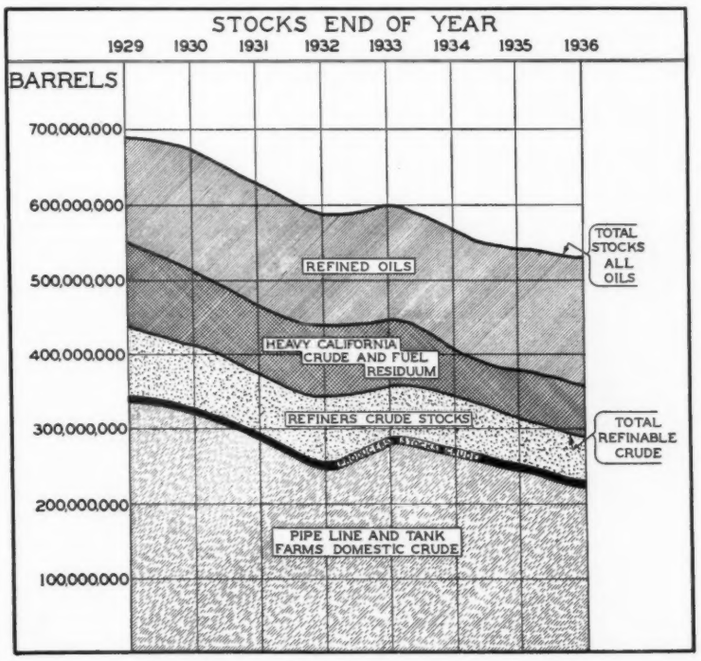
By W. T. ZIEGENHAIN

Faced with having to meet new peak demands for crude oil during 1937, how long should the petroleum industry continue to withdraw its life-blood from storage? That question is being studied by every oil executive charged with the responsibility of maintaining the economical and uninterrupted operation of his company's properties. As we enter the new year, only 53 days' supply of refinable crude oil remains above ground as reserves compared with 104 days' supply when we started withdrawing oil from storage in 1929.

In the interim the industry has digested the flush production which came from the vast East Texas field, from the Oklahoma City pools, Kettleman Hills, Long Beach, Conroe and Van, while no new fields of this caliber have been discovered in the past year.

Thus the problem of determining whether crude stocks should be further reduced prompts the most intimate study of all factors concerned and the final decision as to what a reasonable economic limit shall be must be made in the light of current economic conditions and not based upon calculations or plans made in past years.

To determine what the safe minimum working stocks of crude shall be involves a study of underground oil reserves as well, but until more accurate data can be given to cover a greater number of productive areas, the matter of establishing a definite "economic limit" must be delayed. Likewise, the true economic limit of stocks is influenced by the changing posted field prices for crudes, by strikes, threats of war, tax rates, foreign trade agreements, the nature of the oil and many lesser factors. Also, as the consumption of crude oil increases, a greater margin of visible oil stocks may be justified. Oil is now recognized as indispensable in maintaining the even flow of trade and industry and is a defense weapon of the first order. The petroleum industry has scattered its refineries and has developed oil-producing properties in so many states of the nation that substantial stocks of oil are most essential to its continuous operation. In view of this, 53 days' supply could not be considered greatly in excess of requirements. It is essential, however, that the method used in arriving at this figure be outlined, since there is no established method for arriving at such a conclusion.



In this analysis, the Bureau of Mines monthly reports were taken as the basis, and the accompanying graph depicts the data contained therein up to October 1 of this year. In order to estimate the condition of stocks as of the first of next year, trends were noted over the first nine months of 1936 and current crude production figures were balanced against the estimated consumption of crude.

In calculating the days' supply of crude available as reserves, it is assumed that the demand for crude in 1937 will be 7 per cent greater than in 1936. If this proves true, and many authorities in the industry have agreed upon this estimate, there will be need for an average of 3,317,000 bbls. of crude oil daily.

By January 1, 1937, stocks of refinable crude will approximate 289,000,000 bbls. Of this quantity, approximately 40,000,000 bbls. of the oil will be in pipe lines or in transit. Another 57,000,000 bbls. of crude will be in refinery tanks as working stocks. Producers will hold something like 6,000,000 bbls. of oil on their leases as working stocks, and about 10,000,000 bbls. would seem to be the irreducible limit to which tank-farm oil stocks may be drawn without abandoning the tankage. Thus, in all, there are at least 113,000,000 bbls. of refinable crude tied up as working stocks at all times and the 289,000,000 bbls. of crude which may be expected to be reported as stocks of refinable crude oil available next January 1 really represent a margin over bare needs of 176,000,000 bbls., or stated in terms of days, represents 53 days' supply.

In the same manner, the figure of 104 days' supply was arrived at at the end of 1929, when the refinable crude stocks stood at 428,445,000 bbls. and the current daily demand was reported at 3,022,000 bbls.

Obviously, this analysis of stocks does not take into account the inventories of heavy California crude oil, which now approximate 65,000,000 bbls.

53

After deducting working stocks of refinable crude in pipe lines, at refineries, on tankers, on producers' leases and allowing a bare working margin to remain on tank farms the industry will enter 1937 with only 53 days' supply available compared with 104 days' supply at the close of 1929 when the rather continuous drain upon the reserves maintained above ground first started.

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Extension of Oil Price Increase Is Awaiting Developments

Developments the first of the week indicated that major crude oil buyers will wait until late in the month or early in January before finally deciding whether or not they will meet the crude price advances announced December 4 by the Continental Oil Co. to become effective January 4.

The increase of 17 cents per barrel effective in Oklahoma, Kansas, North Texas and the Rocky Mountain areas came as a surprise to the larger crude buyers and it was indicated that they would take full advantage of the unusual situation in which the effective date for the advance follows the announcement by one month. Unofficially it was explained that action, if any, on a price increase early in January would be dependent on developments in the industry over the next three or four weeks. Action of producers and state regulatory bodies in maintaining production within the recommendations, including the forthcoming January allowables, and trends in refinery markets were pointed to as holding the key to advances in posted prices at the wells.

MORAN EXPLAINS

The case for those who favor the substantial increases announced by the Continental company was clearly set out by President Dan Moran, who in explaining that the present statistical situation in the industry justifies the higher schedules, said: "The bases for such a decision are definitely reflected in the drastic declines in crude inventories, the splendid cooperative spirit exemplified among compact states in their proration proceedings and the unusual competitive demand for pipe line connections.

"A war among producers is imminent unless fair recognition is given their continued adherence to reduced allowables in isolated fields where special treatment will be required to perpetuate the balance that must be maintained among producing states and the law of supply and demand. The producer deserves the compensation for his adherence to various conservation programs and a better price undoubtedly will lessen protests against localized reductions in allowables. In short the producer must have higher allowables or higher prices. In the belief that it is for the good of the industry and in the interests of conservation we have elected to take the latter course. It must be kept in mind, however, that to sustain the increase all producers must do their part by restricting unnecessary drilling."

The Continental's new schedules provide for a posted price of $1.35 for crude oil of 40° gravity and above in Oklahoma, Kansas and Salt Creek, Wyo., and $1.25 for the same grade in North Texas. The usual 2 cents per degree of gravity will be made effective for the lower gravities. The company has refineries located at Ponca City, Okla.; Baltimore, Md.; Wichita Falls, Tex.; Glenrock, Wyo.; Farmington, N. M.; Lewistown, Mont., and Artesia, N. M. In the Mid-Continent and Rocky Mountain areas its refinery requirements are said to average around 30,000 bbls. daily with the company's net production several thousand barrels greater. The company buys crude in fields connected by pipe line systems to its refineries and sells its production in other areas. It also has production in the Gulf Coast fields and California. The Barnsdall Oil Co., Derby Oil Co. and Globe Oil & Refining Co. announced that they would meet the Continental's advance on January 4. These companies operate refineries in Oklahoma and Kansas and also have producing properties.

Opinions obtained by field representatives of this publication in all parts of the oil country the first of the week varied widely in regard to the desirability of the prospective price increases. In general there was agreement that higher prices for crude oil and refinery products are in prospect for the coming year, but some question the wisdom of making the increases effective at the start of the year and they also favor a smaller increase than the 17-cent raise announced by Continental.

In justifying price increases operators point to a tight crude market and the large gain in demand assured for next year.

In addition to the factors pointed out by Mr. Moran, they add the higher operating costs brought about by advances in materials and equipment and the higher labor costs. The continuing necessity of making large expenditures to modernize plant and field equipment following the unprofitable operating period of the depression years is also stressed. In this connection the problem of finding 1,200,000,000-bbl. reserves next year to offset the probable domestic demand for that amount is a factor following a year in which new discoveries have been less than the current demand. Large expenditures in exploratory work of all kinds including the drilling of deeper tests are in prospect for 1937.

Other viewpoints agree higher prices will be justified at the proper time in 1937 but are against higher schedules during the winter months of decreasing consumption for the most important refinery products. They fear that the refining and marketing branches will not be able until later in 1937 to advance and maintain prices which will offset the higher crude costs. The state allowables which in most of the producing states are higher than the Bureau of Mines recommendations for December are submitted as part of the picture indicating that the industry does not have the proper background at this time for higher crude prices. These observers explain the present tight crude market as due to the scramble which is characteristic of year-end periods in which new agreements between sellers and purchasing companies are necessary. They feel that the crude market will be easier after the first of the year with demand less and a continued high rate of production.

Finally there are those who question the soundness of a policy of higher crude prices as a solution to a fundamental problem brought about by failure to restrict drilling to the requirements necessary to assure an economic recovery of oil. The net result of this development has been a reduction in per well allowables which is offered in explanation of the need of higher crude schedules. The contention is that many producers will refuse to go along on a proration program which reduces their per well production unless they are given compensating price increases. This position is challenged with the contention that the higher crude prices will aggravate instead of ameliorate this problem of drilling control and at best only postpone the solution which must be found.

PROMOTED

B. F. PICKARD

Benjamin F. Pickard of Tulsa, vice president and general manager of the Central States Light and Power Corp. and previously a vice president of Oklahoma Natural Gas Co., has been made acting general manager of the Laclede Gas Co. of St. Louis following the resignation of Edward P. Gosling as president of Laclede and of Harley L. Clarke as chairman of the Utilities Power and Light Corp., holding company. Pending reorganization successors to Gosling and Clarke have not been named.

Federal Control Sponsors Are Watching Oil Industry

WASHINGTON, D. C.—Federal authorities interested in the oil industry are closely watching developments in the rivalry between Texas, Oklahoma, Kansas, and perhaps other producing states for increased petroleum markets. Outcome of the controversy may have an important bearing on the possibility of federal control legislation.

Should Texas continue exceeding allowables recommended by the Bureau of Mines, and be joined by Oklahoma and other major producing states, proposed federal production control would unquestionably gain some support. This would depend upon either a break in crude prices as the result of increased production or loss of markets by states which follow the bureau's figures.

Last week's boost in crude prices and the apparent stability of the production industry stands for the present as a bar to federal legislation, in the opinion of congressmen from oil states.

Reports were again current during the week that Secretary Ickes is preparing a new federal control bill for introduction in the new congress. Ickes and his close associates insisted the reports were unfounded.

Senator Elmer Thomas of Oklahoma admitted he had heard the reports, but could not vouch for their accuracy.

Meanwhile, Representative Sam Rayburn's spurt in the race for the house floor leadership added to the belief no oil control legislation could be enacted by congress during this session. As chairman of the house interstate and foreign commerce committee he made evident his opposition to federal control. With his own state against such legislation he killed any chances of a favorable report on the Thomas-Disney bill.

REORGANIZATION UNIT—*Vinvale refinery of Rio Grande Oil Co., Southgate, Calif.*

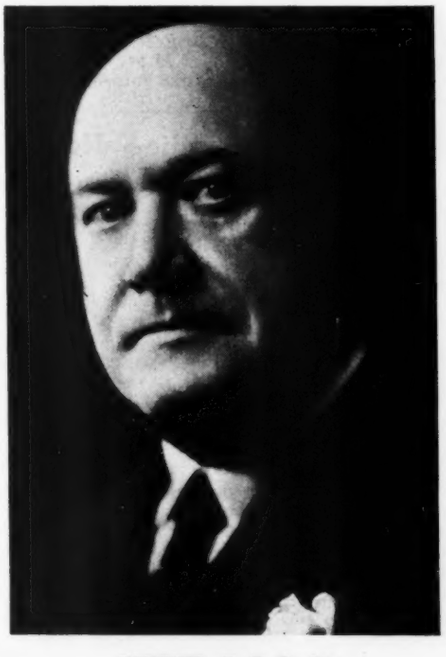
Reorganization by Richfield Is Finally Sanctioned by Court

By L. P. STOCKMAN

LOS ANGELES, Calif. — Reorganization of Richfield Oil Co. and its subsidiary, Pan American Petroleum Co., which have been in receivership for more than five years, and merger with Rio Grande Oil Co. were formally sanctioned by Federal Judge William P. James of the United States District Court in Los Angeles December 4. Members of the board of directors as set forth in the reorganization plan with the eleventh member to represent creditors and bondholders of the old Richfield Oil Co. include Harry F. Sinclair, chairman of the board, Consolidated Oil Corp.; George MacDonald, director, Consolidated Oil Corp. and Cities Service Co.; P. H. O'Neil, director, Petroleum Corp. of America; W. Alton Jones, vice president, Cities Service Co.; Charles S. Jones, president, Rio Grande Oil Co.; F. R. Coates, president, Cities Service Co.; Fred Bartlett, Pasadena; C. Parker Toms, chairman of the reorganization committee; H. R. Gallagher, president, Consolidated Oil Corp., and William C. McDuffie, receiver and trustee of the Richfield and Pan American properties.

REORGANIZATION BASIS

Under the reorganization, Richfield bondholders for each $1,000 of bonds will receive 47.89 shares of stock plus the right to purchase 2.39 units at $100 per unit. Each unit contains one $100 debenture of the new company, two warrants to purchase one share each of the new company at a sliding scale ranging from $15 to $20 over 10 years and one share of stock in the new company. In addition each Richfield bondholder is given a right to buy an additional 23.95 shares of stock in the new company at $10 per share. Pan American bondholders for each $1,000 of bonds receive 42 shares of stock of the new company plus the right to buy at $100 a unit 2.10 units containing the warrant, debenture and stock. In addition they receive the right to purchase at $10 per share 11.09 shares of stock in the new company. Richfield unsecured claims for each $1,000 will receive 22.19 shares of stock in the new company plus the right to buy at $100 per unit 1.10 units containing the abovementioned warrants, debentures and stock. In addition they get the right to buy 11.09 shares of stock in the new company at $10 per share. Pan American unsecured claims for each $1,000 will receive 2.66 shares of stock in the new company with the right to buy .13 units at $100 containing the aforementioned warrants, debentures and stock and in addition may purchase 1.3 shares of stock at $10.



ACHIEVER—*H. F. Sinclair*

The plan approved provides for amalgamation of Richfield Oil Co., Pan American Petroleum and Rio Grande Oil Co. by a transfer of assets and securities to a new corporation designated as Richfield Oil Corporation, although to all intents and purposes this procedure will only represent a reorganization of the existing corporate units. Cities Service Co., which acquired a large block of the outstanding bonds and preferred stock of Richfield Oil Co. and Pan American Petroleum several years ago, recently exchanged its holdings for Rio Grande stock and as a result the latter company is now held jointly by Cities Service Co. and Consolidated Oil Co. Because of good will value and marketing activities, the name Richfield will be retained.

INTEGRATED UNIT

The reorganized company will start out as a completely integrated concern but will be obliged to undertake a wildcat drilling campaign or purchase some of the larger independent operators to provide sufficient crude production. A rumor has been going round that Consolidated Oil Co. has been considering laying a new pipe line from the Gulf Coast to California.

Richfield Oil Co. had 2,061,257 shares of common stock of no par value outstanding along with 399,900 shares of 7 per cent preferred stock with a par value of $25 per share. Outstanding bonds include $24,981,000 of Richfield Oil Co. first mortgage 6 per cent maturing in 1944 and $9,145,400 of Pan American 6 per cent first mortgage maturing in 1940. Richfield Oil Co. owns all outstanding stock of Pan American Petroleum which in turn owns Los Angeles Midway Pipe Line Co., the Watson refinery and tank farm and certain productive

leases. Other interests of Richfield include all outstanding stock of Signal Hill Gasoline Co., United Oil Co., Richfield Realty Corp., Vapor Treating Processes, Inc., Richfield Distributing Co., and Rioco Investment Co. Until recently, Richfield Oil Co. owned 52 per cent of the outstanding stock of Universal Consolidated Oil Co., but this stock equity was surrendered to Universal Consolidated early this year under a compromise agreement which in part provided Richfield would return this stock to Universal Consolidated in consideration that Universal Consolidated agreed to drop its recognized claims against Richfield Oil Co., and relinquish part of its undrilled acreage to the latter. As a result Richfield acquired a limited amount of acreage in the eastern extension of the Montebello field and an additional lease in the El Segundo field of Los Angeles Basin. Universal Consolidated, which has production in several fields and owns the outstanding stock of Lost Hills Water Co. is thus again operating as an independent company.

FACILITIES ACQUIRED

The new company acquires three refineries from Richfield Oil Co. and one from Rio Grande Oil Co. with a combined charging capacity of 107,000 bbls. per day. The former's units consist of a 2,000-bbl. skimming plant at Bakersfield, a 55,000-bbl. skimming plant at Hynes and a 40,000-bbl. complete unit at Watson. At the Hynes refinery, Richfield has a Cross cracking unit with a rated capacity of 14,000 bbls. daily and two Black cracking units at the Watson refinery with a daily cracking capacity of 16,000 bbls. From Rio Grande Oil Co. the new company acquires a skimming plant with a daily charging capacity of 10,000 bbls. on straight run distillation and a Sinclair cracking unit with a daily capacity of 3,000 bbls. In addition the new company will start operations with eight natural gasoline plants in various fields.

From Signal Hill Gasoline Co., wholly owned subsidiary of Richfield Oil Co., the new concern receives an absorption unit on the Crampton lease at Elk Hills with a daily capacity of 5,000,000 feet and another in the Rincon field rated at 6,000,000 feet per day. Both are operating at a small part of capacity. Two absorption plans in the Long Beach field with daily capacities of 18,000,000 feet and 5,000,000 feet, respectively, have been shut down for some time due to lack of sufficient natural gas. Another 5,000,000-foot plant at Huntington Beach and smaller unit having a daily capacity of 500,000 feet in the Midwy-Sunset field are also inactive. Most of these units can be removed to other districts whenever the company develops a sustained flow of wet gas. From Rio Grande Oil Co. the new company acquires an absorption plant in the Santa Fe Springs field with a daily rated capacity of 15,000,000 feet but this unit has been shut down due to insufficient gas. The absorption plant of Reservoir Hill Gasoline Co., subsidiary of Rio Grande, in the Long Beach field, is rated at 15,000,000 feet per day but is not processing its maximum rating. Richfield Oil Co. recently found it necessary to bring in a cargo of natural gasoline from the Gulf Coast to meet California requirements.

PIPE LINES

Pipe line facilities consist primarily of a 10-inch welded diesel powered line extending from Elk Hills to tidewater at Los Angeles harbor, a complete coverage in Los Angeles Basin and a submarine loading line at Elwood. The aggregate main and lateral lines acquired by the new company from Richfield Oil Co., Pan American Petroleum, and Rio Grande approximates 500 miles. Richfield Oil Co. and Rio Grande have six marine terminals, 120 tankcars and approximately 300 automotive units. Operations are carried on in California, Washington, Oregon, Arizona, Nevada, Utah, Montana, Idaho and in British Columbia. Many of the Richfield service stations will be revamped and tentative plans call for the erection of about 100 additional retail units and modernization of existing distributing depots. Richfield and Rio Grande gasoline is marketed through about 4,000 dealers and resellers.

The new company will start off with a daily production of approximately 16,800 bbls. per day in addition to obligations to purchase part of current production of Barnsdall Oil Co. and Pacific Western Oil Co. Rio Grande and Barnsdall are jointly interested in certain properties and tideland leases in the Elwood field. This is on a fifty-fifty basis and Rio Grande takes the total production which at present approximates 3,000 bbls. per day. Rio Grande's other main production is in the Midway-Sunset field, where daily production approximates 225 bbls., and at Long Beach and Santa Barbara Mesa, where daily production is averaging around 1,350 bbls. and 300 bbls. respectively. Richfield is producing about 2,900 bbls. per day at Elk Hills; 300 bbls. at Kern River; 100 bbls. at Lost Hills; 1,900 bbls. at Midway-Sunset; 450 bbls. at Rincon; 500 bbls. at Huntington Beach; 6,000 bbls. at Long Beach; 175 bbls. at Santa Fe Springs; 100 bbls. at Torrance and 25 bbls. per day in the Whittier field. Aggregate storage facilities for crude and refined oils, including steel tanks, reservoirs and tanks in distributing depots total about 7,500,000 bbls., although no data is available with respect to oil actually in storage. Consummation of the plans will give the new company seven tankers and four barges with a total carrying capacity of 510,000 bbls.

RIO GRANDE HEAD—*Charles S. Jones*

Richfield has 312 wells capable of producing and an additional 83 which have been idle for several years. Some of the latter can be returned to production but it remains to be seen whether they will be commercially productive. Rio Grande has 30 producing wells and a 50 per cent interest in 31 more being operated by the Barnsdall Oil Co.

Executive Committee Named by I.P.A.A. Meeting

The Independent Petroleum Association of America, at its annual meeting in Oklahoma City, in addition to reelecting its officers, elected the following executive committee:

J. Steve Anderson, vice president Anderson-Prichard Oil Corp., Oklahoma City; H. D. Atha, vice president Gordon Oil Co., Mount Pleasant, Mich.; J. S. Bridwell, Bridwell Oil Co., Wichita Falls, Tex.; Harold B. Fell, Tulsa; Wirt Franklin, Ardmore, Okla.; N. T. Gilbert, general manager Turman Oil & Gas Co., Tulsa; Charles F. Roeser, president Roeser & Pendleton, Inc., Fort Worth, Tex.; H. M. Stalcup, vice president Skelly Oil Co., Tulsa; Ralph T. Zook, president Sloan & Zook Companies, Bradford, Pa.; Frank C. Condon, president Hawkeye Petroleum Corp., Longview, Tex.; E. B. Shawyer, Shawver Petroleum Co., Wichita, Kans.; H. R. Cullen, Quintana Petroleum Co., Houston, Tex. (also vice president of Mid-Continent Oil and Gas Association); Van S. Welch, Flynn, Welch & Yates, Inc., Artesia, N. Mex.

Considerable interest was manifested during the week in the amendment used in adopting the report of the subcommittee on the drilling of unnecessary wells. This motion read:

"Moved that the subcommittee's report on evils attending unnecessary drilling in proven fields be approved, conditioned on the understanding that this association is not making any specific recommendations as to how the recommendations contained in the report should be made applicable, if at all, to pools which have already been fully developed or practically fully developed."

Interest centers chiefly on that section of the subcommittee report which states:

"The remedy for such unnecessary and for such spotted drilling is obvious. In some instances the operators, by agreement, can settle the question of well spacing, drainage area, proration unit, and method of allowable. In most instances, however, an agreement of all operators cannot be obtained, so, for all practical purposes, the remedy for unnecessary or excessive drilling rests in the action of the administrative body which fixes the method of allocation for each field, or in the courts should the method of allocation fail to meet legal tests.

Unnecessary and excessive drilling will almost automatically cease, and reasonable, uniform drilling will almost automatically follow, whenever the method of allocation, as between operators in a field, is based upon a proration unit comprising not less than an area which one well will efficiently and economically drain, and which then provides for distributing the allowable in a manner to take into account the differences in the recoverable oil in the various productive units in the field. A somewhat similar result is reached by a uniform spacing program with the spacing unit fixed at approximately the same size as the proration or drainage unit above mentioned, even though distribution be on a per well potential basis; provided, no exceptions are given to the spacing rule, or if there should be such exceptions, then with the allowable for the well adjusted in order to prevent discrimination against other tracts.

If it be assumed that one well will efficiently and economically drain x acres in a particular field, it seems to be reasonable to assume that the administrative body cannot legally enforce an order which in practical effect requires the drilling of more than one well on an x acre tract in order to enable the operator to obtain a proper allowable, being one which gives the operator his fair share of the allowable for the field as the owner of an x acre tract with a well on it.

While it is often said that, under the statutes in some states, the administrative body is authorized to regulate drilling, production, etc., only to prevent physical waste, surely it does not follow that the regulatory body has the power by its orders, directly or indirectly, to increase unnecessarily the cost of production; and it does not follow that the administrative body has the power to transcend reasonable limits even to prevent physical waste. Surely an order of an administrative board could be set aside which required the use of gold pipe or silver derricks, for such an order would have no other effect than to cause unnecessary expense to the operator. It seems reasonable to conclude, therefore, that, where one well will efficiently and economically drain x acres, an order of the regulatory body which leaves the operators no alternative but to drill more than one well to each x acres if they are to obtain their proper, respective shares of the allowable production for the field, would be set aside by the courts for the reason that it causes unnecessary expense.

"Finally, let it be repeated that it seems reasonable to say that the administrative body is not authorized to make an order which in practical effect requires the drilling of a well where the income from the well will not pay for the expense of drilling and operation, and such drilling is not reasonably necessary for the recovery of the oil under the tract.

"It seems to be wholly immaterial that, in determining the size of the unit, economic conditions or economic waste may be involved, and, for that matter, none of the conservation statutes in any state prohibits, as some seem to think, the consideration of economic waste or economic conditions in any manner whatsoever."

The meeting place for the next annual meeting has not yet been selected.

Oil Industry Awaits Outcome of Robinson-Patman Hearing

WASHINGTON, D. C., Dec. 7.—Cheese, linoleum, tile, yeast and cosmetics all have a direct bearing on the oil industry through the operation of the Robinson-Patman antiprice discrimination act. These are the commodities covered by the first 10 complaints issued by the Federal Trade Commission under the act, and most of the practices and all of the principles involved in these cases will apply equally to the oil industry and every other industry engaged to any extent in interstate commerce.

Already several respondents have filed formal answers for hearings in the linoleum case in Boston. When, in the course of a few months, the commission makes its ruling, the entire subject will be dumped in the federal courts for adjudication.

In the meantime, business men are in jeopardy unless they can figure out exactly what the Robinson-Patman law means and comply with it, because of the provision in the Clayton act, which the R-P act amends, that an injured competitor may bring a civil suit seeking triple damages plus attorney fees from any firm violating the law. So, if the law is finally upheld and certain trade practices determined to be illegal, any concern in the oil or any other business which has been using the outlawed methods, however innocently, may be faced with damage suits totaling thousands of dollars.

TO SPEED COMPLAINTS

The trade commission has been attempting in an unofficial way to tell business men how its attorneys think the law applies in their trades, and while these informal opinions have been very helpful they do not bind the commission nor do they have any bearing on the results of civil damage suits. For this reason there is every disposition to speed up the F.T.C. complaints and get some final decisions from the courts.

Many marketing practices in the oil industry are not touched by the Patman act complaints so far issued, but the complaints are indicative of the problems faced by distributors. Moreover, the answers to the complaints challenge the constitutionality of the law on several grounds and suggest the first big battle will be in the field of law rather than economic discussions of whether or not a particular selling method actually discriminates.

Quantity discounts are challenged in almost every complaint. It is significant there is no allegation of secret rebates or other practices considered reprehensible prior to enactment of the Patman law. In each case the seller issued a schedule quoting different unit prices for varying quantities. These quantity discounts were available to any and all customers on equal terms, but the F.T.C. charged that "the effect of such discriminatory prices is to enable some purchasers to purchase such commodities at a lower price than competing purchasers can buy the same products, solely because of the variation of volume of resale trade done in such products by the different purchasers"

Straight quantity discounts are universal in practically every business, and if the F.T.C. line of reasoning is upheld it will mean sales may have to be made at a single unit price, gallon or trainload.

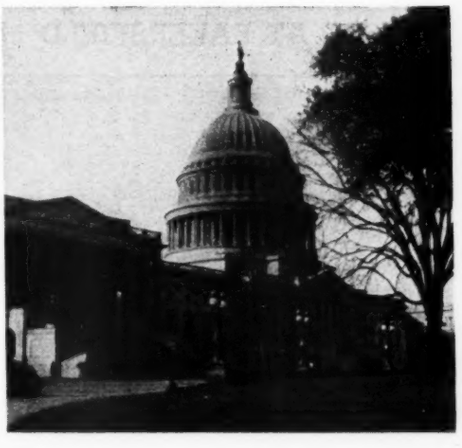
Another type of discount attached in several of the complaints is based on the dollar volume of purchases made in any one month. If sales reach a certain figure by the end of the month the unit price for the entire month is less than otherwise. The commission considers this to be a discrimination against small retailers.

The so-called functional discount is a feature of several of the first complaints. This is a discount based on whether the purchaser is a retailer, chain store, mail order house, wholesaler or contractor. The linoleum complaint, for example, charges that the Bird Floor Covering Sales Co. had one scale of prices for independent retailers, another for wholesalers, and another for Montgomery Ward & Co. retail chain stores, regardless of the quantity purchased. Another example is the complaint against United States Quarry Tile Co. charged with giving wholesalers a 15 per cent discount and denying it to tile contractors, although the so-called wholesalers are in fact said to be retailers in direct competition with contractors.

ALLOWANCES

Payment of allowances to retailers for advertising manufacturer's products is also involved in some complaints, and other charges deal with lesser practices peculiar to certain trades and not generally applicable to the oil industry. Montgomery Ward is included as a respondent in the linoleum case on the charge of knowingly receiving the benefit of a discriminatory price, an important aspect of the Patman law but a charge which the mail order firm denies.

Each of the answers sets up a defense based largely on conditions peculiar to that industry and therefore not applicable to petroleum marketing practices. In all the quantity discount cases, however, the respondents claim the discounts are justified as they make only due allowance for differences in cost of manufacture, sale, or distribution. This is a defense permitted by the law, but will probably have to be substantiated with accounting data. Few concerns have sufficiently detailed cost accounting systems to determine the exact differences in costs of selling various quantities and, even where they have such, the commission may



find flaws with the system used because there is no general agreement among accountants as to how various items of overhead should be allocated.

One of the cheese companies makes the defense that its discount schedule is to meet competition, which raises the interesting question of what the commission will do when alleged price discriminations are the general practice in an industry.

Another common defense is that the practices complained of do not injure anyone substantially. This will force the F.T.C. to call in dozens of small dealers to testify how they are put to disadvantage through their inability to handle large enough quantities to get the discounts available to their larger competitors.

The question of interstate commerce is raised in several answers. If a transaction is not in interstate commerce the federal law cannot touch it, although some states have laws similar to the Robinson-Patman act, so the commission must draw a fine line between interstate and intrastate commerce. For instance, one of the cheese companies states it distributes to retailers through branch houses which send salesmen over local routes every week taking and filling orders, and that such sales are not in interstate commerce. Many other companies distribute in similar fashion. This same company, Kraft-Phenix Cheese Corp., admits it makes sales in interstate commerce direct to large dealers on quantity discounts which result in a lower unit price than available to small retailers served by its local branches, but it puts up the interesting legal argument that if there is any discrimination involved in this practice it is a discrimination in favor of interstate commerce and against intrastate commerce, and that the federal government cannot step in to protect local trade.

CONSTITUTIONALITY

More important, in the long run, than any of these specific denials, are the attacks on the constitutionality of the R-P act made in most of the answers. It is these questions that the courts will be called upon to decide, and if the law is found to be unconstitutional there will be no use arguing the fine points of whether this or that particular sales policy discriminates here and there.

Gleaned from several of the answers, these challenges are as follows:

The law attempts to regulate competition in local commerce rather than interstate commerce;

Even when interstate sales are involved, the acts complained of are not a burden on commerce and are not within the scope of Congress' power to regulate interstate commerce;

The law attempts to regulate price and selling practices irrespective of their effect on interstate commerce and not within any power of Congress;

The law attempts to regulate private business not dedicated to the public use as utilities are;

The law violates the Tenth Amendment to the constitution which reserves to the states all powers not specifically granted to Congress;

The law takes property from sellers without due process of law, in violation of the Fifth Amendment;

The language of the law is so vague, uncertain and indefinite that it fails to inform the individual what is unlawful and in that way is a denial of due process of law;

The law constitutes an unconstitutional delegation of legislative power to administrative officials.

These are formidable legal charges. Of course none of them may be sustained by the courts, but it is certain enforcement of the law will not be clarified until they are settled.

When the trade commission issued its first batch of Robinson-Patman complaints and it became clear these covered practices common to many industries, observers in Washington hoped there would be a speedy determination of the extent to which quantity discounts and other time-honored sales methods could be used, but now it appears legal questions take precedence over economic arguments. Until the constitutionality of the law is decided it will not do much good for the commission to make detailed rulings on what constitutes price discrimination. But meanwhile the law, and the threat of civil damage suits, hangs over the head of every firm which sells anything in interstate commerce.

Dismissal of Indictments Is Asked at Madison

MADISON, Wis., Dec. 7.—Defendant oil companies and individuals charged with conspiracy to violate the antitrust laws asked dismissal of two indictments in federal court here today on grounds that the grand jury which returned them was drawn illegally.

Government counsel was granted 30 days by Judge Patrick T. Stone to answer or demur to the plea in abatement which was presented jointly in behalf of all the 26 oil concerns, 3 trade publications and 72 individuals named in the two true bills, one of which charged a combination to maintain artificial market prices and the other a conspiracy to restrict jobber margins.

The court also took under advisement motions to dismiss indictments against the Marathon Oil Co. of Tulsa and Tide Water Oil Co. of New York on grounds that the corporations have been dissolved. The Marathon company, named in the second indictment, returned November 6, was dissolved July 21, 1936, said A. M. Gee, Findlay, Ohio, counsel for the Ohio Oil Co., of which Marathon was a subsidiary. Tide Water, a defendant in both indictments, was dissolved September 4, declared Charles Garside, New York, who argued that no prosecution could be maintained against the corporation on the July 28 indictment by reason of its dissolution. Government counsel asked time to answer the motions.

Judge Stone overruled a motion by Archie D. Gray, Houston, Tex., for dismissal of the indictments as applying to Gulf Refining Co. on jurisdictional grounds. Counsel for other companies and individuals who similarly had pleaded to the court's jurisdiction withdrew their motions to join William J. Donovan, former assistant attorney general and counsel for 17 indicted corporations and 13 individuals, in the abatement plea.

Among those so joining were J. C. Denton, Tulsa, representing Mid-Continent Petroleum Corp. and three of its executives, Jacob France, Baltimore, Robert W. McDowell and Thomas Fitzgerald.

Mr. Donovan announced that his clients, on the first indictment, include Standard Oil of Indiana; Socony-Vacuum; Wadhams Oil; Cities Service; Cities Service Export; Empire Oil & Refining; Louisiana Oil Refining and two of its officials, John A. Walsh and D. W. Harris; Continental Oil and four officials, Dan Moran, L. T. Cramer, H. J. Kennedy and Edward Karstedt; Pure Oil Co.; Shell Petroleum; Sinclair Refining; Texas Co.; Phillips Refining and three officers, H. A. Gardner, A. M. Hughes and H. E. Koopman; Skelly Oil, W. G. Skelly and James Nagle, Tulsa; Barnsdall Refining, Globe Oil & Refining of Oklahoma, Kansas and Illinois; Deep Rock Oil; R. O. Audrain and J. W. Warner, Tulsa.

The method of selecting the grand jury, challenged in Mr. Donovan's plea, has been followed here and elsewhere for many years without previous contests, though he cited an appellate court decision reversing a conviction under similar circumstances.

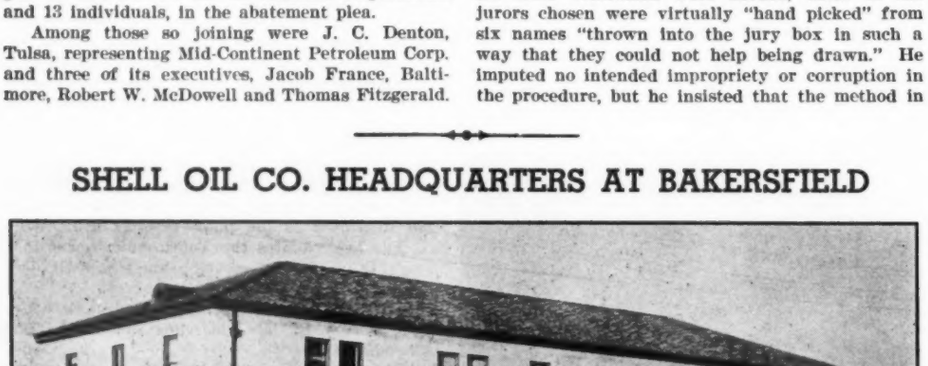
Congress passed the law, in 1879, as a substantial protection of citizens' rights after the "carpetbagging" days when Confederate veterans were excluded from jury lists in some states. Mr. Donovan explained, and prescribed a specific code for selection of juries strictly by lot. It provides that the clerk of the court and jury commissioner alternately shall put one name into the jury call box up to a list of not less than 300 qualified veniremen. In this district the names were not always put in alternately and not always in the presence of the jury commissioner, although, court officials declare, he was informed of the qualified list and signed the certifications in the usual manner.

Mr. Donovan also alleged that last spring, when six more veniremen were needed, three of the jurors chosen were virtually "hand picked" from six names "thrown into the jury box in such a way that they could not help being drawn." He imputed no intended impropriety or corruption in the procedure, but he insisted that the method in itself was prejudicial, and stood firmly "on the rights of these defendants."

Judge Stone, while conceding that the method might have been irregular, contended no proof had been shown that the rights of the defendants had been prejudiced thereby and suggested, "from a practical viewpoint," that the point be waived to avoid the necessity of a new grand jury, the repetition of "a whole summer's work" and unnecessary expense to both government and defense.

In directing that issue be joined on the plea in abatement, however, the court, informed that trial of cases on the two indictments would consume at least three months, pointed out that he "would dislike to take three months to try these cases and then find, at the end of the trial, that the indictments must be quashed."

SHELL OIL CO. HEADQUARTERS AT BAKERSFIELD



Shell Oil Co. district headquarters, Bakersfield, Calif.

LOS ANGELES, Calif.—Completed recently at a cost slightly in excess of $60,000 Shell Oil Co. has moved its Bakersfield production and exploration department into its new headquarters.

The office building comprises two stories and basement equipped with air conditioning facilities. A warehouse has also been built to house pipe, valves, fittings, bolts and material required by Shell in field operations. A garage, 52 by 150 feet, has all facilities for servicing automotive equipment. No less than 175 pieces of rolling stock, including automobiles, trucks and trailers, are in use in the Backersfield field by Shell. The production superintendent of the Bakersfield division of Shell is Claude Peavy, who is now on a business visit in the East.

Diesel Power Anniversary of Interest to Oil Industry

NEW YORK.—Diesel power, its range of adaptability, efficiency and economy was extolled by an imposing group of industrialists last week during the twelfth National Power Show in New York. More than 300 leaders in industry and engineering heard the diesel committee forecast an almost fantastic future for the compression-ignition engine.

Virtually every industry and individual companies supplying material and services to the oil industry were represented from manufacturers of sensitive automatic refinery control instruments to those turning out two-ton valves for control of high-pressure oil and gas wells. Manufacturers of oil field casing, boilers, refineries, welding material and instruments for pipe line construction were all represented.

Of particular interest to the oil industry, however, were the forecasts of an almost unlimited field for diesel-powered prime movers. The predictions, based partially on demand since 1932, were made on the fortieth anniversary of this country's introduction to diesel engines.

The committee sponsoring the anniversary luncheon included the leading manufacturers of diesel engines, General Motors officials and Walter C. Teagle, chairman of Standard Oil Co. (New Jersey).

Edward G. Budd, president of the company which manufactured the diesel-powered streamlined train, predicted progress made so far in adapting diesel engines to railroad transportation would appear insignificant within a few years.

B. C. Heacock, president of Caterpillar Tractor Co., said his company will have completed more than 21,500 units by the end of December, covering only five years.

Prof. R. U. Blesingame, president of the American Society of Agricultural Engineers, said there is great promise to the 6,000,000 farmers of this country in the diesel engine.

Edward B. Pollister, president of the Busch-Sulzer Brothers Diesel Engine Co., gave a general review of industrial fields already invaded and other prospective users of diesel power.

C. L. Cummins, president of Cummins Engine Co., said he had driven a diesel-powered coupe from Los Angeles to New York for a total fuel cost of $7.62 and a 22,000-pound truck had averaged 43.8 miles an hour for 10,005 miles without pausing to refuel.

Charles F. Kettering, vice president of General Motors Corp., and Col. Robert H. Morse, president of Fairbanks-Morse & Co., also spoke on various phases of diesel power.

Fuel Oil Sales Gain

The Bureau of Mines reports sales of gas oil, distillate fuel oil and residual fuel oil in the United States increased from 330,321,000 bbls. in 1934 to 365,985,000 bbls. in 1935. The total for 1935 approached within 6,000,000 bbls. of the peak in 1929.

Improved industrial activities and greater public buying power were given as reasons for the increase. Fuel oil used in the heating of buildings became the most important item and surpassed in quantity that used in the bunkering of vessels for the first time in 1935.

Railroads, handling 4 per cent more freight in 1935, increased their fuel oil purchases 5 per cent.

Threat of Taxation Chief Topic Before Houston Meeting

By NEIL WILLIAMS

HOUSTON, Tex.—Cooperation of oil producers in seeking relief from excessive taxation which "threatens the continued existence of the industry" was urged at the annual convention of the Texas division of the Mid-Continent Oil and Gas Association here December 4 and 5. The association also approved initiation of a statewide theft prevention program to curtail a loss of hundreds of thousands annually to the industry in the state. Increasing taxation has become a burden to the industry, and with proration, curtailment of production and constantly diminishing returns per well, development of natural resources is being discouraged, it was pointed out.

"Development of natural resources in Texas is in its infancy, and Texas oil men should take cognizance of the danger which threatens the continued existence of their industry," Joseph S. Bridwell, of Wichita Falls, admonished.

Taxation has become the largest industry in the country, even exceeding the oil business itself, John P. Morgan, tax counsellor of Sun Oil Co., and chairman of the Tax Men's Committee of the association, declared in his committee report. Taxes now are second to depreciation in operating costs of the oil industry.

"Taxation of the oil industry has reached the point of exploitation," Mr. Bridwell, who is chairman of the special tax committee, reiterated in reading the report of his committee. Mr. Morgan said oil companies alone cannot deal successfully with taxation as a problem. Cooperation of everyone in the oil industry, in conjunction with the association, is needed. Texas producers are beginning to realize that if taxes continue to increase it will be only a question of time until their property is confiscated.

Mr. Bridwell said more than 13,000 producing wells in Texas have been abandoned during the past five years (some leaving possibly thousands of barrels of oil in the ground), because of prohibitive operating and producing costs. High taxes have been contributory to these prohibitive costs.

In the end, present high taxation is going to cost the state, Mr. Bridwell stated. Forced abandonment of wells prematurely robs the state and its subdivisions of tax revenue from the remaining oil that might be produced, not to mention the waste created, and the investment loss to the producers.

Mr. Bridwell showed that in some counties producers are being taxed as high as 12 cents a barrel. Before November, 1936, the tax averaged 7¾ cents a barrel. The legislature placed an additional tax of three-quarters cent a barrel on oil worth less than $1 per barrel, and three-quarters of 1 per cent per barrel where the value exceeded $1. This increased the average tax to 8½ cents a barrel.

Taxes paid the state and its subdivisions by the oil-producing industry in 1935 totaled $13,000,000. During 1936, Mr. Bridwell said, that figure will be increased to $15,000,000, and during 1937, on the present basis, producers in the state will pay $20,000,000 in taxes.

In many counties the oil-producing industry pays the major portion of all taxes, George C. Gibbons, executive vice president of the association, told the convention. In Rusk County, he said, oil pays 89 per cent of the total taxes; in Gregg County, 88 per cent; Montgomery County, 84 per cent; Upshur County, 83 per cent, and Pecos County, 80 per cent. In many counties the percentage runs from 70 to 75 per cent.

Mr. Gibbons said the average tax of 7¾ cents per barrel paid by Texas oil producers is greater than the average paid in sister producing states. In Louisiana the average is 7 cents, while in Oklahoma the average is 5½ cents, and in Kansas, New Mexico and Arkansas it is lower. In 41 representative counties of Texas, the tax is over 10 cents per barrel.

There are 17 different taxing units or agencies in Texas, Mr. Gibbons listed, each reaching into the oil-producing industry for a share of the taxation. Of these eight are special state agencies while nine are local units such as independent school districts, irrigation districts, etc.

Mr. Gibbons reported the association's membership had increased during the year from 150 to 735.

The significance of the Social Security Act and how it will affect the oil industry was analyzed by Raymond Myers, tax attorney for Magnolia Petroleum Co., and chairman of the Social Security Committee, formed on request of Governor James V. Allred for assistance and recommendations from the Texas oil industry in framing the state security act.

W. R. Boyd, Jr., executive vice president of the American Petroleum Institute, said the $12,000,000,000 oil industry is paying in taxes $1,000,000,000 annually, or on the basis of about $1.13 per barrel. He asked the cooperation of Texas producers and the Mid-Continent Oil and Gas Association in a fight against such taxation.

Walter B. Pyron, executive vice president of Gulf Oil Corp., Houston, told what had been done by his company in trying to reduce losses from theft. Although the company had been successful in breaking up theft rings in certain areas, the problem must be taken by all companies together. Oil field thieves now are most active in South Texas, he said, particularly within the past several weeks. He admitted it would be impossible to stop much of the petty thievery but felt the industry could do something to stop major thefts.

A resolution was passed authorizing appoint-

(Continued on Page 22)

J. D. Collett, president of the general Mid-Continent Oil & Gas Association, presents distinguished service awards to Jack P. Shannon, vice president Snowden & McSweeney, Inc., Fort Worth, and Joe S. Bridwell, president of Bridwell Oil Co., Wichita Falls, Tex.

Jake L. Hamon, Dallas, Tex., president of the Mid-Continent Oil & Gas Association of Texas, presiding at the annual convention. Seated is George C. Gibbons, Dallas, Tex., executive vice president.

George A. Hill, Jr., president of Houston Oil Co., Houston, Tex., presenting distinguished service awards to William H. Francis, vice president and general counsel, Magnolia Petroleum Co., Dallas, Tex., and to John G. Pew, vice president, Sun Oil Co., who received the award in behalf of his father, J. Edgar Pew, vice president of Sun Oil Co. and president of Sun Pipe Line Co., Philadelphia, Pa.

Pipe Line Activity

Pipe Line Valuation Test

WASHINGTON, D. C.—Officials of the valuation division of the Interstate Commerce Commission are awaiting the reaction to their first attempt to value an oil pipe line company for rate-making purposes. They expect to know by December 31, under the first order issued by the commission.

Copies of the tentative valuation of the Atlantic Pipe Line Co., the first of 45 to be completed, have been sent to the attorney-general of the United States; the governors of Texas and New Mexico; New Mexico State Corporation Commission; Railroad Commission of Texas; Humble Pipe Line Co.; Texas City Terminal Railway Co. at Texas City, and to the company itself.

Each one has been notified that if it has any protest to make against the tentative valuation, the detailed protest should be filed with the commission by December 31. Although officials anticipate protests from one or more sources, which will tie up final action for months at least, if none develops, the valuation will be formally made official by the commission without delay.

Pending the reaction on this first of the valuations, officials of the division said they are pressing completion of the reports for the other companies. They said the protests filed in the Atlantic company's case will have no effect upon the tentative valuations for other companies, although they concede final action in the case of Atlantic will have a definite bearing on final valuations for the others.

The commission tentatively valued the Atlantic company, whose principal lines extend from Wink, Texas, and Hobbs, New Mexico, to the Texas Gulf coast, at $14,258,658. This figure is based only on the property used by the company for transporting oil. The commission's figure for the property owned by the company was fixed at $15,712,000. The first figure, however, would be used for rate-making purposes.

In reaching these figures, the commission found the company owns, in addition to other necessary property, 979.3 miles of trunk line and uses 972.5 miles of trunk line, and owns 375.5 miles of gathering line, using 374.7 miles of the gathering lines.

The original investment, including $570,706 for land and rights of way, was found by the commission to be slightly under the figure of the company itself. Commenting on this phase, the commission said:

"The investment of the carrier in carrier property, including land and rights of way, on date of valuation, is stated in its books as $21,408,689.67. If readjustments were made as indicated by our accounting examination, this amount would be reduced to $21,021,057.76 recorded money outlay. This conditionally adjusted amount includes $1,506,480 for oil storage facilities in excess of those required for transportation purposes."

The commission held in its report that the cost of reproduction new of the property owned by the company would be $17,142,296 while that of the property used would be $15,202,971. Less depreciation, as figured by the commission's experts, reproduction of the property owned would cost $13,130,938 and that used, $11,788,324.

All figures are as of December 31, 1934.

Cass County Station

SHREVEPORT, La.—United Gas Public Service Co. has begun construction of a pipe line station on the Cass County side of Rodessa field to serve its recently acquired 8-inch line to Longview. The present station on the Louisiana side of the field will serve as a stand-by.

Line to Nome Field

HOUSTON, Tex.—Sun Pipe Line Co. has let contract for construction of a 6-inch welded oil line from the Nome field in Jefferson County to terminal facilities at Beaumont, a distance of 20 miles. This is the first pipe line outlet for the field which was discovered during the past few months and at the present time has a total of five producing wells, making a daily average of approximately 575 bbls.

United-Atlantic Extension

FORT WORTH, Tex.—United Pipe Line Co. is reported preparing to make an extension to its 8-inch line from the Falvey station near Longview to connect with Atlantic Pipe Line Co.'s Horton station south of Longview in Gregg County. The United line was built this year by East Texas Pipe Line Co. from the Rodessa field in Louisiana to Longview, but was later acquired by United. With such a connection Atlantic is expected to move Rodessa crude via the East Texas field to its Gulf Coast terminal at Atreco, through its trunk line between those points.

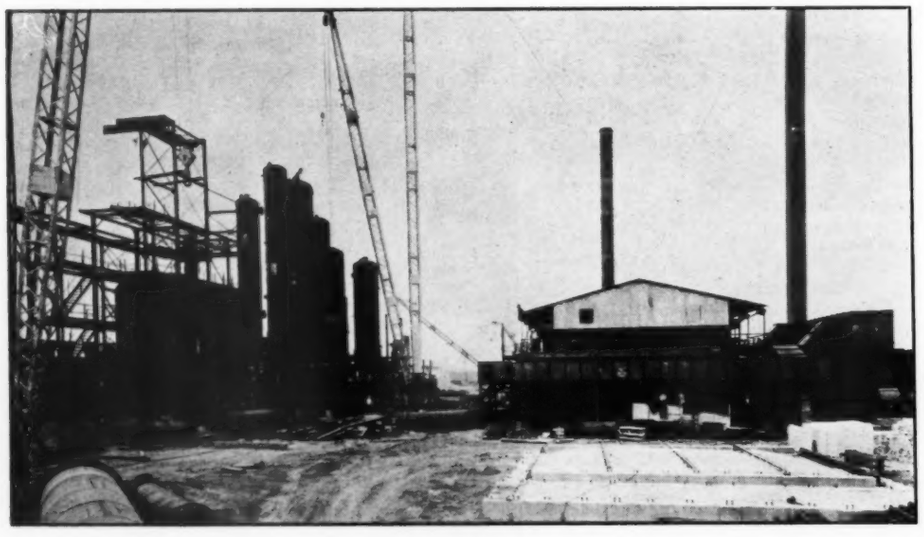
Rochester, N. Y., Gas Line

NEW YORK.—The Public Service Commission has confirmed its order of last October, authorizing the Cabot Gas Corp. to build a 92-mile transmission line to bring natural gas from Pennsylvania through four western New York counties to the Rochester city line.

Opponents of the $1,500,000 project obtained a rehearing from the commission, but confirmation was by a vote of 3 to 1.

The proposed line would be run through Allegany, Wyoming, Livingston and Monroe counties, to supply the Pavilion Gas Co., industrial users in the vicinity of Rochester, and domestic consumers along the proposed line.

ATLANTIC'S NEW ATRECO REFINERY TAKING SHAPE



The new 20,000-bbl. refinery of the Atlantic Refining Co. is taking shape at Atreco, Tex., as furnaces and distillation equipment arrive and are erected. The construction of this complete refinery which includes a polymerization unit, is under contract with the M. W. Kellogg Co. The refinery, located at the pipe line terminal of the Atlantic Pipe Line Co. on the Neches River near Port Arthur will add an important link to the Atlantic refineries, serving coastal and export markets from the local docks.

Refinery Projects

Chalmette to Add Cracking Unit

NEW ORLEANS, La.—Chalmette Petroleum Corp. is to begin immediate construction of a new 9,000-bbl. cracking unit in its refinery at Chalmette, La., which will practically double the present plant capacity. The present cracking unit is being converted into a topping unit. Construction of the new unit is to be done by Arthur G. McKee & Co., of Cleveland, Ohio, on a turn-key job contract and will be completed about the middle of February, 1937. W. M. Kellogg Co. will design the unit which will operate under license of Gasoline Products Co., Inc. The plant will operate almost exclusively on Coastal Louisiana crudes shipped in by water.

Barnsdall Planning Gulf Refinery

The Barnsdall Refining Corp. of Tulsa, according to E. B. Reeser, president, is considering the erection of a 10,000-bbl. refinery in the vicinity of Corpus Christi, Tex. Although plans are still indefinite, the company may locate in Corpus Christi, Aransas Pass, Ingleside or Port Lavaca.

Barnsdall officials were in Corpus Christi last week on a combined business and pleasure trip, and a representative of the company is making surveys on the lower Gulf Coast to determine the facilities offered for a refinery site. The company owns an interest together with the Humble Oil & Refining Co. and the Flour Bluff Corp. in the newly opened Flour Bluff field of southeastern Nueces county, 10 miles south of Corpus Christi. The field is showing prospect of considerable development, and may rank with the more important fields of the area.

Barnsdall also holds considerable production in the Placedo field of Victoria county, which prompts the consideration of Port Lavaca as a possible site for the plant. Last week, the company began an important wildcat in Aransas county near the town of Rockport, which, if successful in opening oil production, will further influence the company's decision on the project.

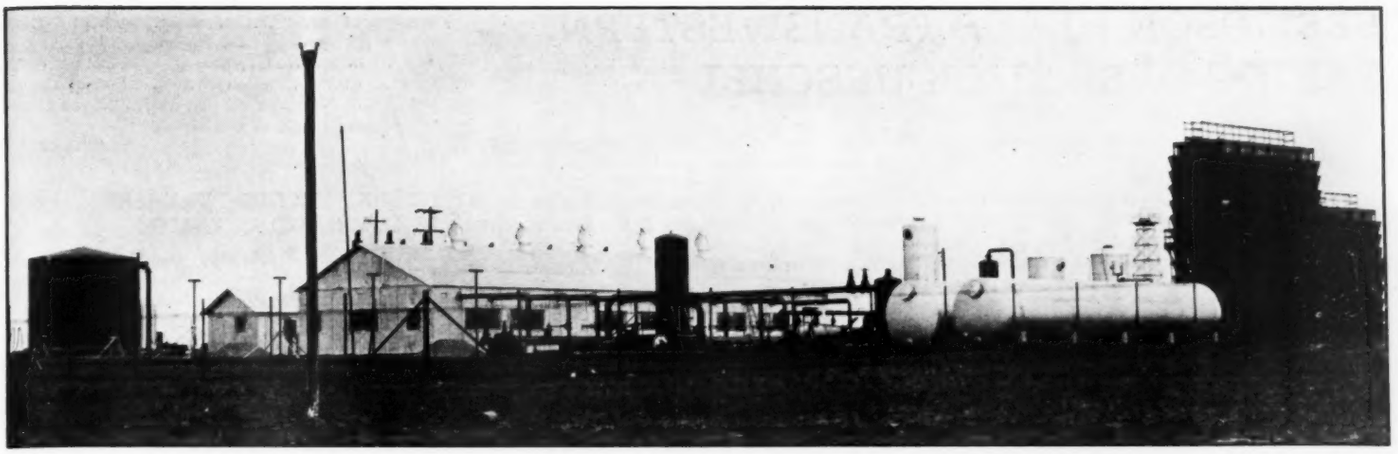
Erecting New Coleman Refinery

FORT WORTH, Tex.—Coleman Refining Corp., composed of McGlothin and Jones, is erecting a 750-bbl. daily capacity skimming plant in the William Woolsey survey in the Overall pool, 2 miles south of Coleman, Tex. The plant will operate on crude from the Coleman pool. These men also operate a plant in Jones county and also one at Lubbock, Tex.

Gainesville Plants Operating

FORT WORTH, Tex.—Gainesville Refining Corp.'s new 1,500-bbl. refinery at Gainesville, Tex., is now on regular operation; manufacturing gasoline, kerosene, distillate, gas oil and fuel oil. The company is now rebuilding parts of its plant to increase the daily capacity.

Rose Refining Co., another new Gainesville



Carter Oil Co.'s repressuring plant in the Keokuk field, compression equipment consisting of six 200-horsepower compressors

company, is to start operation of its new 600-bbl. skimming plant within two weeks. Both refineries will use crude from the Anderson-Kerr pool three miles east of Gainesville, in Cooke county.

Rado Adding New Equipment

HOUSTON, Tex., Dec. 7.—Work on the installation of $40,000 worth of new refinery equipment is now under way in the McAllen, Tex., refinery of the Rado Refining Co. During the winter the capacity of the plant, now 500 bbls. daily., will be doubled. The refinery is owned by Ralph E. Fair and associates of Houston.

East Texas Refinery Leased

FORT WORTH, Tex.—The refinery operated in Kilgore, Tex., as the Panama Refining Co. has been leased to Leroy Garrison, who expects to operate the plant under the name of the Southwestern Refining Co. The Monarch Refining Co. previously leased the plant from A. F. Anding, and H. W. Marburger was appointed receiver of the Monarch, leasing it to Mr. Garrison.

Terminal Operating New Refinery

HOUSTON, Tex.—Operations were begun recently on the newly erected 2,500-bbl. refinery of the Terminal Refining Co. at Corpus Christi. The plant will process local crude to supply East Coast fuel oil markets.

Natural Gasoline

West Texas Carbon Plant

FORT WORTH, Tex.—Cabot Carbon Co. is preparing to erect the first carbon black plant ever constructed in West Texas. The plant will have a daily capacity of 20,000,000 feet of gas, residue gas being taken from Gulf Oil Corp. casinghead plant near Monahans in Ward County near where the Cabot plant will be erected.

New Plant for Saxet Field

HOUSTON, Tex.—Construction will soon begin on the new natural gasoline plant in the Saxet field of Nueces County. The Southern Minerals Corp., major producer in the field, has let contracts for a low-pressure absorption type plant capable of processing 25,000,000 feet of gas daily. The gas produced with Saxet light crude in the 5,800-foot or Frio horizon of the field will be moved to the plant through the company's gathering lines.

The contract for construction has been let to the Western Supply Co., of Tulsa, and design and erection of the plant will be under the supervision of M. N. Kotzebue, and of F. P. Peterson, who will head the natural gasoline division of Southern Minerals. The Southern Pipe Line Co., an affiliate of Southern Minerals, will operate the gathering system, construction of which has been contracted to Mid-Continent Supply Co. and the 6-mile, 2-inch gasoline line which will terminate at the company's tank farm on Corpus Christi harbor. Frick-Reid Supply Co. will furnish pipe for the gasoline line and some of the gathering lines. The natural gasoline produced will be blended with the light Saxet crude for export shipment by Southern Minerals Corp.

California September Production

Natural gasoline production in California increased 1,000 bbls. daily to 41,000 bbls. daily in October, according to the Bureau of Mines report for that month. Refinery utilization decreased 3,000 bbls. daily to 37,000 bbls. daily. Shipments increased 3,000 bbls. daily to 4,000 barrels daily. Stocks declined 112,000 bbls. during the month and at the end of October were 1,955,000 bbls.

During the same month daily average production of liquified petroleum gases increased from 1,612 bbls. to 1,749 bbls., of which 484 bbls. were produced at refineries. Daily average sales decreased from 1,855 bbls. to 1,854 bbls.

Still gas production during October amounted to 1,823,274,000 feet, equivalent on a B.t.u. basis to 456,776 bbls. of fuel oil.

Natural Gas News

Lone Star Changes

PITTSBURGH, Pa.—Lone Star Gas Corp. and Mountain Fuel Supply Co. announce the resignation of David E. Mitchell as an officer and director.

Thomas C. Cochran, of Mercer, has been elected to fill the vacancy on the Lone Star Board, and H. J. Crawford, of Emlenton, on the Mountain Fuel board. Mr. Mitchell resigned because of his increasing duties as an officer and counsel of Manufacturers Light & Heat Co., and affiliated Columbia system corporations operating from the Pittsburgh office.

Missouri Gas Well

R. M. Hammond No. 1 N. T. Porter, a mile east of Plattsburg, Mo., which was reported to have blown out in the Squirrel sand at 600 feet, was reported latter to have been capped but a tubing blowout occurred.

Rate Held Confiscatory

The 18-cent gas rate ordered for Mangum and Granite by the Oklahoma Corporation Commission in 1933 was ruled confiscatory in formal findings on file in federal court at Oklahoma City by George T. McDermott, Topeka, circuit judge. The court's decree, which is expected to be filed shortly, will continue the 25-cent rate previously charged by the gas company and permitted under a temporary injunction since the rate reduction order in 1933.

Buffalo Rate Reduced

ALBANY, N. Y.—The Iroquois Gas Co. has been authorized by the Public Service Commission to reduce some of its rates in Buffalo, Lackawanna and numerous villages and towns in Erie, Cattaraugus and Wyoming counties. The reductions, effective December 10, are for use of more than 10,000 feet per month for residential, industrial and domestic use. The new rate in Buffalo is 65 cents per month per 1,000 feet for the first 10,000; 60 cents for the next 15,000 and 55 cents for all in excess of 25,000.

Industrial Gas Line

TILLSONBURG, Ontario.—A. B. Holmes and associates of Toronto have secured right to lay a natural gas transmission line from the east end of the Eden field in Elgin County along the Canadian Pacific Railway right of way to Tillsonburg and Straffordville. Some 8 miles will be laid to deliver industrial gas to plants at Tillsonburg and the Borden milk plant at Straffordville.

Canadian Gas Production

CHATHAM, Ontario.—Natural gas marketed from all Canadian fields in September was officially reported at 1,430,039,000 feet compared with 1,140,433,000 feet in August and 1,215,747,000 feet in September, 1935. For the nine months of 1936 the total was 19,589,641,000 feet against 17,624,461,000 feet in the corresponding 1935 period.

Mixed (natural and artificial) gas imported into Canada in September totaled 11,467,000 feet valued at $7,376 against 9,729,000 feet valued at $5,837 in August.

New Gas Purification Plant

TILLSONBURG, Ontario.—The Southern Ontario Gas Co. of Buffalo, N. Y., has awarded the contract for a $125,000 natural gas purification plant to the Koppers Co. of Pittsburgh, Pa. The plant will be built in the new Brownsville field and will probably handle the entire output of the field, which now has 14 completed wells with an estimated potential open flow of 20,000,000 feet a day. Contracts call for completion of the plant by January 31, 1937, with a bonus for completion by January 15. Some 20 miles of transmission line will be laid along No. 19 highway to deliver gas from the field to the Southern Ontario Gas Co. main transmission line at Ingersoll. Pipe has already been purchased for this line, which will be completed early in the new year.

SEELIGSON HEADS TRANSWESTERN TAKING OVER SLICK-URSCHEL

Properties of the Thomas B. Slick estate and Slick-Urschel Oil Corp. are to be merged into the Transwestern Oil Co. of Oklahoma, the final step in consolidating the oil properties in Oklahoma, Kansas and Texas.

Arthur A. Seeligson will head the new company, and Charles F. Urschel and Mrs. Berenice Slick Urschel will retire from management, but will hold stock in the new company.

ARTHUR A. SEELIGSON

Transwestern Oil Co., of Oklahoma City, has filed a registration statement under the Securities Act of 1933 covering 750,000 shares of $10 par value capital stock.

According to the registration statement, the proceeds from the sale of the stock to be received by the company, together with bank loans aggregating $3,000,000, are to be applied toward the payment of $9,500,000, the purchase price of properties to be acquired by the company from the trustees of the Thomas B. Slick estates and Berenice Slick Urschel, and the balance will be used for working capital.

In connection with the underwriting agreement, the company states that the obligation of the underwriters to purchase the stock is conditioned upon the simultaneous purchase from the underwriters at $12 a share of 173,267 shares of capital stock by Arthur A. Seeligson, C. F. Urschel and Berenice Slick Urschel, as trustees of the Thomas B. Slick Trust Estates, and of 86,633 shares by Berenice Slick Urschel as an individual. The trustees and Berenice Slick Urschel are to deliver to the underwriters separate options covering an aggregate of 60,000 shares of the company's capital stock. The underwriters have advised the company, it is stated, that they do not intend to include the stock covered by the option in the initial offering. The registration statement further states that upon transfer of the properties the trustees of the Thomas B. Slick Trust Estates and Berenice Slick Urschel are to deliver to the company an option covering 50,000 shares of the company's capital stock, which are to be offered at $16 a share to executives of the company to be selected from time to time by the board of directors on or before December 13, 1941.

THE MARKETS*

CRUDE OIL: *Continental Oil Co.'s announcement of price advance of 17 cents effective January 4 is followed by similar action by Barnsdall Oil Co., Derby Oil Co. and Globe Oil & Refining Co. Action of major buyers generally still in doubt. Tightness of market continues.*

REFINERY: *Burning oils continue to head the petroleum products in point of market strength, but firmness characterizes almost the entire list. Uncertainty regarding prices of crude in the next few months is expected to be reflected in the refined market.*

TANK-WAGON AND SERVICE STATION: *Gasoline and kerosene prices raised .3 cent by Standard of Indiana throughout its territory.*

FINANCIAL: *The oils lost ground along with the rest of a dragging security market. Average of 30 representative stocks for week ending December 5: High, 39.41; low, 37.20; close, 38.97. Week ending November 28: High, 38.79; low, 36.68; close, 38.38.*

*Detailed information in Market Section.

SERVICE STATIONS ENJOINED

LOS ANGELES, Calif.—Superior Judge Ruben S. Schmidt has granted a temporary injunction against eight gasoline service station operators in Los Angeles County, restraining them from selling gasoline below cost in violation of the California Fair Trade Act, the constitutionality of which has just been upheld by the United States Supreme Court. Action was brought by Retail Petroleum Dealers' Association of Los Angeles, which charged that retail sale of gasoline at less than 13.9 cents a gallon is in violation of the act. Defendants have 10 days in which to file an answer before date for trial is set.

FEDERAL GASOLINE TAX MAY BE ELIMINATED IN TRADE

Federal excise taxes on gasoline and automobile sales may be allowed to lapse on July 1, 1937, if the administration undertakes to eliminate overlapping taxation, the Wall Street Journal reports.

These two taxes, along with several minor excises, expire July 1 unless extended. The treasury's recent study of federal-state tax duplication indicates elimination of these two federal levies would help alleviate double taxation.

As a result of increasing interest within the administration on overlapping taxation, the treasury, if its general revenue situation permits, may consent to dropping the two levies. The alternative would be for the federal government to retain these taxes temporarily and offer to barter their repeal for repeal of state levies which intrude on important federal revenue sources.

REFINERY WAGE ADVANCED

Seven thousand Standard Oil Co. of New Jersey employes working on an hourly basis at refineries, terminals and other points in New Jersey were granted wage increases totaling 10 per cent last week. Five per cent of the increase has been in temporary effect since June to adjust wages to increased cost of living. The temporary increase was made permanent and an additional 5 per cent advance instituted. Plants are affected at Constable Hook in Bayonne, Bayway refinery and Eagle oil works in Jersey City.

A. F. MORRIS IS NAMED CHIEF GEOLOGIST BY EMPIRE

A. F. Morris has been appointed chief geologist of Empire Oil & Refining Co., effective January 1, 1937, filling the vacancy created by the resignation of J. M. Nisbet, it is announced by A. W. Ambrose, vice president and assistant general manager.

Mr. Morris was graduated from the University of Oklahoma in 1918 and has been in geological work in the Mid-Continent since. He joined the geological staff of Empire in October, 1924, to do subsurface work and in 1929 became assistant chief geologist.

Robert L. Kidd has been made assistant chief geologist. A graduate of the University of Indiana in 1923, he joined Empire in 1925, went to the Oil Hill district office as an assistant geologist and afterward succeeded John R. Reeves as district geologist there. In 1930, he went to Bartlesville as assistant to C. C. Hoffman, in charge of geological work for Cities Service Gas Co., and in 1933 was transferred to geophysical work.

J. C. Kennedy continues as head of the land department.

Mr. and Mrs. Alf G. Heggem, of Tulsa, left Sunday for a trip to Detroit, Mich. They will visit Mr. Heggem's parents, Mr. and Mrs. Charles O. Heggem in Massillon, Ohio, before returning to Tulsa.

OIL SCOUTS WATCH TILLMAN COUNTY TEST

When testing began at the Indian Territory Illuminating Oil Co. and Foster Minerals Corp. No. 1 Hatler, section 32-2s-17w, wildcat south of Frederick in Tillman County, Oklahoma, last week, oil scouts from far and wide were there in force to get first-hand news. This was considered one of the most promising wildcats in Oklahoma, and on the first day of the test it made several head flows of oil, mud and water. The next morning, however, it had a hole full of water with only about 2 per cent oil. Plug failed to shut off water. Operators plugged back and were to test again.

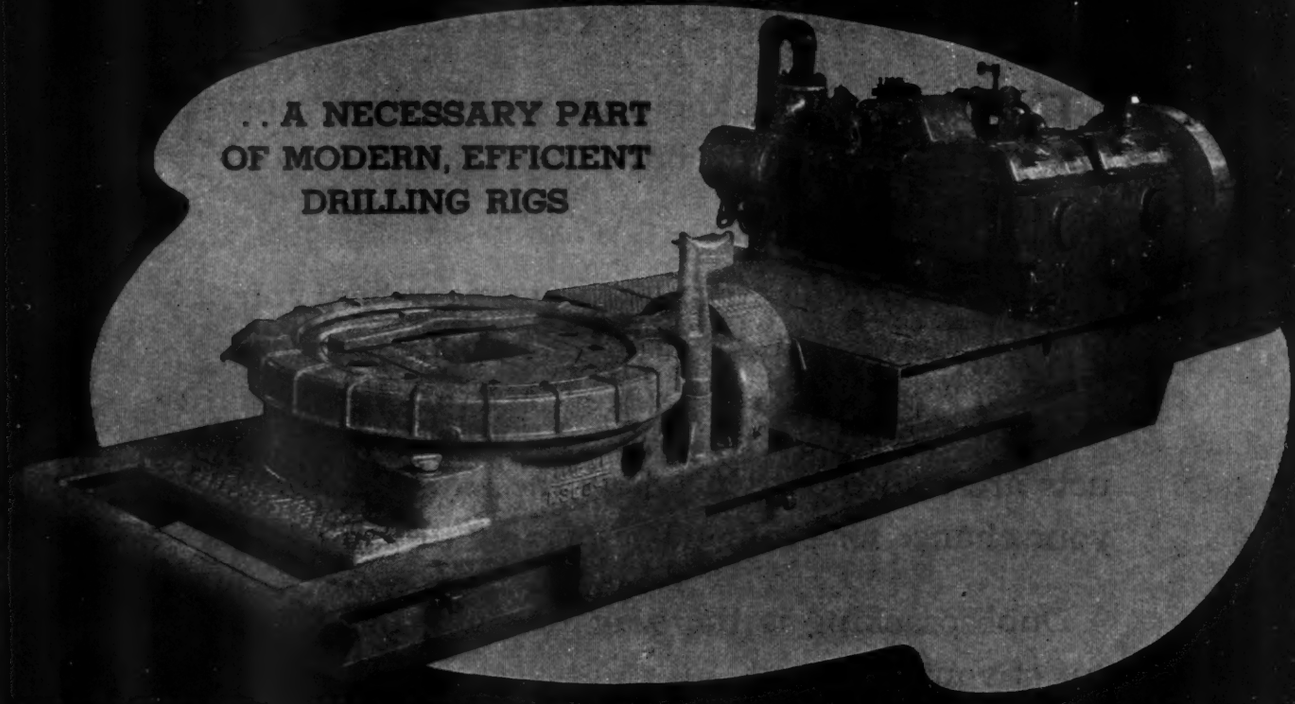
This picture of the scouts was taken a short distance from the wildcat by Karl H. Kanalt, engineer for Parkersburg Rig & Reel Co. The scouts are, left to right: C. C. Hutchens, Skelly Oil Co.; M. W. Smith, Anderson-Prichard Oil Corp.; H. B. Starns, Shell Petroleum Corp.; J. T. Morrow, Mid-Continent Petroleum Corp.; W. B. Adams, Indian Territory Illuminating Oil Co.; K. U. Brill, Continental Oil Co.; M. E. Hestbeck, Amerada Petroleum Corp.; Gene Barnes, Pure Oil Co.; John J. Jones, Magnolia Petroleum Co.; Murray J. Wells, Indian Territory Illuminating Oil Co.; Fred Jackson, Phillips Petroleum Co.; O. F. Beaty, Magnolia Petroleum Co.; Frank Worrell, Mid-Continent Petroleum Corp.; James P. Mosier, Twin State Oil Co.; Choc Price, Carter Oil Co.; T. C. Cunningham, Lone Star Gas Co., and R. W. King, state conservation officer.

IDEAL

"Reg. U. S. Pat. Off."

DIRECT ROTARY DRIVE

TYPE "A"



A 9 x 8 Ideal-Ajax Twin Steam Engine, equipped with a power-operated reverse or "steam kicker", drives the Rotary Machine directly, instead of using the large hoisting engine through the Draw Works. Increased operating efficiency is also secured by:

Less Wear on Large Hoisting Engine and Draw Works
Saving in Steam and Lubricating Costs
Better Control over Drilling Operations
Quieter Running when Drilling
Easier Spudding
More Usable Derrick Floor Space
Provides a Sturdy Stand-by Power Unit

THE NATIONAL SUPPLY COMPANY
OF DELAWARE

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National

If you are a refiner—

THE SELLER sets the price you pay for your crude oil and the buyer sets the price you get for your gasoline

There's just one stage of the game when *you* are the boss—while the crude is in your plant

From the time it is pumped in till the products are loaded out, you have the say There is your chance for profit Then it's up to you

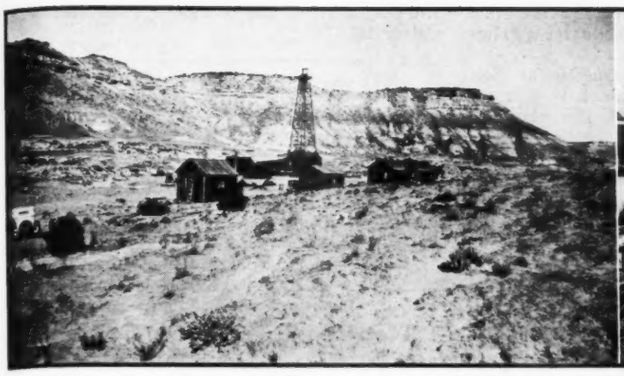
Dubbscracking is the way to make the most out of your crude oil

Dubbscracking gives the biggest yield of the best gasoline from any crude or any other charging stock, and at lowest cost, royalty and all

It's up to you

Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor



Escarpment back of Utah Southern Oil Co. No. 1 Hyde in Grand County, Utah

Canyon of the Grand River in eastern Utah

Oil seep in canyon of San Juan River in southeastern Utah

Stratigraphic Traps Explored for Future Utah Oil Supply

By L. G. E. BIGNELL

SALT LAKE CITY, Utah—Utah has long been regarded as an area where oil probably exists in commercial quantities and about 130 tests have been made within the state since 1891. Most of these were less than 3,000 feet but several have been drilled to between 4,000 and 5,000 feet and one well in Grand County in eastern Utah penetrated to a total depth of 6,120 feet and had a small showing of oil. Numerous structures have been mapped by both surface and geophysical methods and at least one well in Grand County on what is known as the Cisco Beach line is now searching for hidden or stratigraphic trap type reservoirs.

EARLY EXPLORATION

The early history of oil exploration in Utah was closely allied to the discovery of the solid hydrocarbons such as asphaltum, gilsonite, ozocerite and various kindred products. These residues of petroleum have been found in many places in Utah as well as some oil seeps, especially along the San Juan River where oil springs have been known to prospectors and traders for many years but they did not receive any attention until 1882 when E. L. Goodridge made the first location of a claim. It was not until February, 1920, however, that the larger program of exploration for oil was commenced, as it was then approval of the oil and gas leasing act of congress provided for prospecting upon, leasing of, and producing from public lands of the United States.

Much of the federal land in Utah upon which, prior to the act, prospecting had been difficult or impossible when opened for leasing and development was covered by permits during 1920 and 1923 and the interest in the search for oil became more serious. Prior to 1929 approximately 40 wildcats of substantial depth and 50 more shallow exploratory holes were drilled, of which perhaps one-half were located in accordance with geological advice.

This early prospecting campaign resulted in the discovery of helium gas at Woodside, Emery County; helium and nitrogen at State Line, in Grand County; petroleum gas at Boundary Butte, San Juan County; petroluem gas at Cisco, Grand County; and petroleum gas at Ashley Valley, Uintah County. Carbon dioxide gas was found at East Anticline, San Juan County, and near Farnham, Carbon County. Oil showings were exposed at Mexican Hat, San Juan County; Big Six, Grand County; Cane Creek, Grand County; Crescent, Grand County; Coalville, Summitt County, and Vernal Bench in Uintah County.

There was a marked let-up in exploration during the years following 1929 but despite this slowing of activities petroleum gas was found at Clay Basin, Dagget County and Last Chance, Emery County. Oil showings were had in wells drilled at Bloomington, Washington County, and in Salt Valley, Grand County. The helium gas reserves and well at Woodside in Emery County in the east central portion of the state was taken over by the United States government.

At present there are several important tests being drilled in various parts of the state. The well of Leonora Mining & Milling Co., at Promontory, Box Elder County, is shut down at 2,340 feet; Longwall Petroleum Co., Ltd., Coalville, Summitt County, drilling at 1,951 feet; Diamond Oil Co., Diamond Fork Fold, Utah County, drilling at 4,012 feet and preparing to test for oil; Arrowhead Petroleum Corp., Punch Bowl, Washington County, drilling at 2,475 feet; Mountain Fuel Supply Co., Clay Basin, Dagget County, set casing at 6,114 feet, in which is reported as the Dakota gas sand. The California Co., San Rafael well, Emery County, making water at 2,285 feet and this company is preparing to skid rig. Ramsey Petroleum Co. is drilling on the Last Chance dome, Emery County, and had a showing of gas at 2,771 feet. The acreage surrounding this well has been unitized for a new deep test. Columbia Crude Corp. is reported drilling at Seven Mile Fold, in Grand County at 1,725 feet. One of the most important tests is being drilled by Utah Southern Oil Co. and Equity Oil Co. on a unitized block on the Cisco Beach line structure in Grand County and at last report was making alterations of surface equipment to drill ahead at 5,679 feet.

SUBSURFACE CONDITIONS

These tests, past and present, indicate the active interest in finding gas and oil in commercial quantities in Utah. The geological evidence of the subsurface conditions as related to the source and accumulation of oil has been gradually shaped by these observations, experience and analysis, and progressive operators have not been slow to take advantage of the more modern geological methods and have applied geophysics to the study of their land. Modern equipment has been moved to the drilling sites and substantial capital is available for the work. Many of the major companies have some interest in these tests and indications are the structures will at least receive thorough tests and if the oil or gas is in them it will be found.

SURFACE SIGNS

In addition to the evidence secured by the numerous tests Utah presents many signs on the surface of the petroliferous character of some areas. Probably nowhere in the United States are there concentrated within a single district such ample showings of oil and its kindred substances as in the Uintah Basin and upon its surrounding mountain ranges. There are oil seeps, oil sands and oil shales with deposits of asphaltum, gilsonite, elaterite, tabbyite, and various other forms of petroleum residue. But for the fact that recent alluvium or wash has covered much of the surface and obscured the outcrops upon which the geologist depends for his study of structure it is not unlikely numerous tests would have been drilled in that district which to date has recorded only a few which have supplied valuable geological data.

East central Utah is underlaid with huge salt beds of Pennsylvanian age indicating presence of an ancient sea shut off from major water supply until it receded into its basin and evaporated leaving its salt behind, much as the waters of Salt Lake are now doing. The domes which have been drilled in this area are mostly in this old basin, far out from its edges, and have encountered insufficient sand to make oil or gas fields.

Utilizing the small showings had in some of the wells drilled in east central Utah and the maps and reports from geological surveys of the surface, explorers now are employing geophysical methods to assist in locating the ancient shores or beaches of this old salt sea. If old shore lines can be discovered through drilling it is believed some of the sand bodies will be of sufficient thickness and of proper character to contain gas and oil. While these hidden pools may be hard to find it is believed by many operators they will repay the cost and effort if discovered.

In southern Utah the search has mostly been upon normal structures which are being drilled, with the expectation that the formations underlying them will consist of both source material and reservoir rocks. Exploration has not progressed

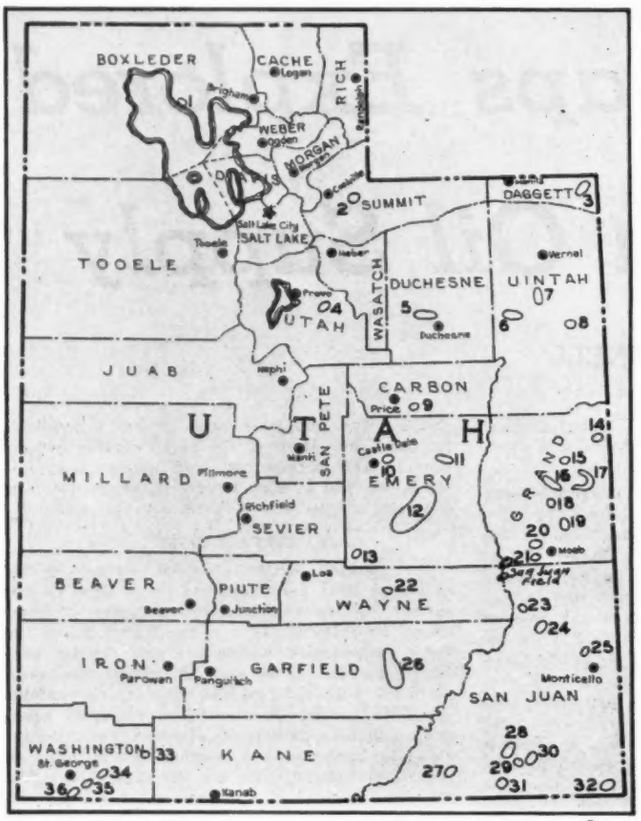
to the stage where the character of the deep rocks is known, but such lower strata correlate, as to geological age and position, with formations which are productive of oil elsewhere.

In the western and northern areas the preliminary stages of exploration have hardly been reached. Surface study is impeded by huge deserts of salt, sand and aluminum, which cover the older sedimentary rocks.

It has been estimated from $4,500,000 to $5,000,000 have been expended in direct prospecting for oil in Utah. With the change in the federal law governing the leasing of government land it is probable many thousands of acres of good territory now held under permits will be either tested before December 31, 1937, or released after that date. More than 70 per cent of the land in Utah belongs to the United States and the state also owns many thousands of acres some of which is almost certain to participate if discovery of gas or oil is made. Under the leasing law the state participates in all royalty payments for production from federal lands.

There are two important refineries at Salt Lake City, Utah Refining Co. plant with a capacity of 6,000 bbls. daily and the plant of Wasatch Oil Refining Co. capable of handling as much as 1,500 bbls. of oil daily. Most of this oil is now shipped from adjacent states. The two small oil fields of Utah, Virgin in Washington County, and San Juan in San Juan County, have produced less than 175,000 bbls. total since their discovery more than 26 years ago.

There is a good demand for petroleum products in Utah especially during the summer when thousands of tourists visit this very delightful state to enjoy the mountains and the Great Salt Lake, as well as the numerous national parks. Local supply of oil will find a ready market and it is probable some real discoveries will be made within the year.



Structures and principal wildcat tests in Utah

1—Leonora Mining & Milling Co. No. 1 Rozel.
2—Longwall Petroleum Co. No. 1 Coalville.
3—Clay Basin gas field.
4—Diamond Oil Co. No. 4 Government, sec. 16-8s-5e.
5—Duchesne structure.
6—South Myton structure.
7—Vernal Bench structure—oil showing.
8—Ashley Valley structure—gas.
9—Farnham structure CO_2 gas.
10—Huntington structure.
11—Woodside gas field—Helium.
12—San Rafael structure—California Co. Unit, sec. 22-23s-11e.
13—Last Chance structure—gas—Ramsey Petroleum Corp. test, 18-26s-7e.
14—Harley gas structure—Helium.
15—Cisco gas field.
16—Salt Valley anticline—gas.
17—Cisco Shore line structure—Utah Southern Oil Co. No. 1 Hyde, sec. 33-22s-22e.
18—Seven Mile fold—Columbia Crude Corp. No. 1 Rath, sec. 12-25s-20e.
19—Moab anticline.
20—Cane Creek anticline—gas.
21—Shafer structure.
22—Cainville anticline.
23—Gibson structure.
24—Elk Ridge anticline.
25—Lisbon anticline.
26—Circle Cliffs anticline.
27—Organ Rock anticline.
28—Cedar Mesa structure.
29—Mexican Hat oil field—showings.
30—East Anticline structure CO_2 gas.
31—Monumental structure.
32—Boundary Butte gas field—Helium.
33—Virgin Oil field.
34—Virgin dome.
35—Washington dome
36—Bloomington dome

Tax Threat

(Continued from Page 18)

ment of a committee to investigate the theft problem and make recommendations for initiating a statewide theft prevention program.

The report of the nominating committee, of which R. S. McFarland of Dallas, is chairman, was read by A. M. McCorkle, vice president, Stanolind Oil & Gas Co. Its recommendation that all officers and directors be reelected and that six additional directors be elected because of the increase in the membership was approved unanimously. The new directors are M. G. Chaney, Coleman, Tex.; Donald Meacham, Houston Production Co., Houston; John Cowden, Dallas; Harry Bass, Dallas; George Pruter, McAllen, and E. R. Turner, Pan American Production Co., Houston.

Jake L. Hamon, independent operator, Dallas, president of the Texas association, presided. Other officers are Mr. Gibbons, executive vice president; Eugene McElvaney, Dallas, treasurer; and the following district vice presidents: H. R. Cullen, Houston, Gulf Coast; L. A. Grelling, Jr., Tyler, East Texas; Lloyd Wheelock, Corsicana, East Central Texas; R. A. King, Wichita Falls, North Texas; E. J. Dunigan, Jr., Pampa, Panhandle; J. C. Hunter, Abilene, West Texas; Paul W. Pitzer, Breckenridge, West Central Texas; and Al Buchanan, San Antonio, Southwest Texas.

Four outstanding Texas oil men, selected for the part they have played in the founding of the Mid-Continent Oil and Gas Association and in furthering the welfare of the Texas oil industry, were honored at the convention. They are Jack P. Shannon, vice president, Snowden & McSweeney, Inc., Fort Worth; Joe S. Bridwell, president of Bridwell Oil Co., Wichita Falls; William H. Francis, vice president and general counsel, Magnolia Petroleum Co., Dallas, and J. Edgar Pew, vice president, Sun Oil Co., and president Sun Pipe Line Co., now a resident of Philadelphia, Pa. Distinguished service awards were presented them. The presentation to Messrs. Shannon and Bridwell was made by J. D. Collett, Fort Worth, president of the general Mid-Continent Oil and Gas Association. George A. Hill, Jr., president of Houston Oil Co., Houston, presented the award to Mr. Francis. Due to illness, Mr. Pew was unable to be present but the award was accepted by his son, John G. Pew, vice president of Sun Oil Co. The awards consisted of engraved desk clocks with the inscription: "In appreciation of outstanding service to the Texas Oil Industry—presented by the Mid-Continent Oil and Gas Association—Texas Division, 1936."

Warner-Quinlan Bids

Gulf Oil Corp. and Cities Service Co. offers for Warner-Quinlan Co. service stations leading to reorganization of the latter company were resting before a federal district court in New York this week. Hearings on the counter offers by the bidders were reopened December 7. Cities Service Co., largest Warner-Quinlan stockholder, entered a last-minute bid of $4,175,000, topping Gulf's original offer by $50,000. Gulf's bid was extended "a few days" for the convenience of the court.

At a creditors' hearing December 2, Cities Service objected to the sale on the ground the courts might not have authority to permit the deal and said it would hold its offer open for six months. Before the hearing a majority of creditors and trustees had approved the Gulf offer.

Pan American Foreign Corp.

Plans for dissolving Pan American Foreign Corp., 99 per cent owned by Standard Oil Co. of New Jersey, will be submitted to stockholders December 15. Pan American Foreign Corp. is a holding company. Its principal operating subsidiaries are Lago Petroleum Corp., in Venezuela and Huasteca Petroleum Co. in Mexico. It was formed when foreign properties of Pan American Petroleum & Transport Co. were purchased by Standard of New Jersey. Dissolution of the holding company is to be submitted to stockholders December 15 to eliminate duplicate taxation under the Revenue Act of 1936.

Furnace Oils Advanced

Effective December 7, Standard Oil Co. (Indiana) made fractional advances in the tank-wagon prices of Stanolex fuel oil No. 1, Stanolex furnace oil and Standard range oil in the Chicago metropolitan area. At Indiana points in the Chicago area, prices are .1 cent higher, and effective December 15 relative adjustments will be made in the tank-wagon prices on furnace oils throughout the lower peninsula of Michigan.

OBITUARIES

SAMUEL HOCH, 53, maintenance foreman for Pure Oil Co. in the Porter field, Michigan, died recently.

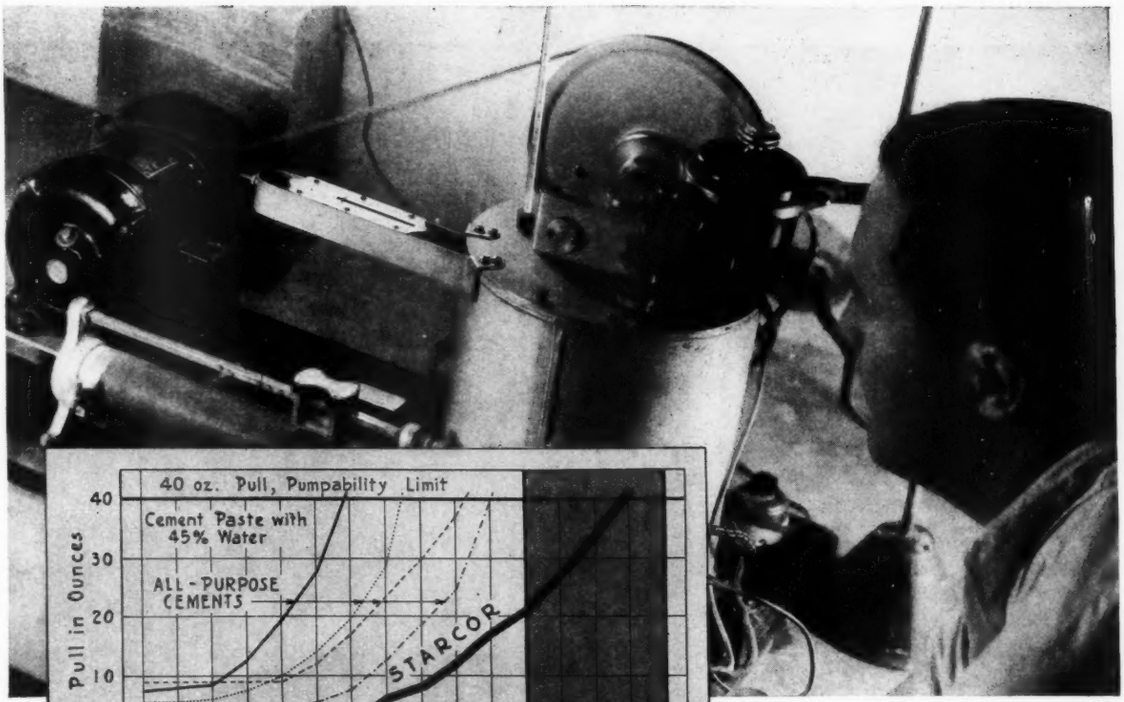
FRED POOLE, scout in western Kansas for the Darby Petroleum Corp., died suddenly at Great Bend, Kans., from a heart attack.

RALPH L. GORMLEY, 46, Tulsa, salesman for American Cable Co., and three other persons were killed in an automobile collision near Topeka, Kan., Dec. 7.

DAVID U. KLINE, 79, of Blairs Corners, Pa., died suddenly, Dec. 5, at the home of F. E. Pryor of Blairs Corners, where he had gone to visit an hour earlier. He was born in Porter Township, Clarion County, Pennsylvania, Dec. 13, 1857. Mr. Kline was a well known oil producer.

JAMES VAN BUREAN GRESHAM, Sr., 56, director of Standard Oil Co., of Louisiana, died in New Orleans, La., Dec. 1, after an operation. He had been connected with the Standard for 38 years and was head of the co-ordinating sales department. He was a native of Greshamville, Ga., and formerly held positions with the company in Atlanta, Ga., and Memphis, Tenn.

EDWARD B. SKINNER, 78, Tulsa pioneer oil man, died suddenly, Dec. 7, from a heart attack. At the time of his death he was associated with his sons, R. W. and P. B. Skinner, in the oil well supply business. Born in Rochester, N. Y., he came west when a boy, living for a while in Kansas, Colorado and New Mexico. He was credited with drilling the first oil well west of Independence, Kans., and was one of the organizers of the Caney Gas Co., which was sold to Kansas Natural Gas Co.



RESULTS OF 'ICE-CREAM FREEZER' TESTS.

"ICE-CREAM FREEZER" TEST

PROVES 'STARCOR', THE OIL MAN'S CEMENT, SETS SLOWLY, HARDENS RAPIDLY

A LEADING Western Oil Company found how to tell in a laboratory just what a cement would do at the bottom of a well. A machine called a Viscosimeter (looks like an "Ice-Cream Freezer"—see above) does the trick by measuring the stiffening of cement slurry as it sets.

How "Freezer Test" Works

The tank has a heating unit and thermometer inserted in a water bath; within is a smaller vessel, mounted on a vertical axis, free to revolve, except for a connection with a spring balance. Any tendency for this vessel to turn is measured in ounces of pull on the scale. An agitator, like a "dasher," is rotated within the vessel by the electric motor.

A measured quantity of cement slurry is poured into the vessel and the dasher revolved, while temperature of the hot bath is maintained at the desired level. As the slurry stiffens, the pull on the spring balance increases. A pull is finally reached which represents the limit of pumpability under field conditions.

Rigid Specification

Based on long experience, this oil company developed a specification which says that, at a temperature of 140° F., the spring balance shall not attain a pull of 40 ounces in less than 140 minutes after mixing, but shall exceed that pull within 180 minutes.

That was one of the targets set up to shoot at in developing 'Starcor', the Oil Man's cement. It is one of the routine tests 'Starcor' has to pass—one of many tests which insure uniformly satisfactory results with 'Starcor', even in deep, hot holes.

Fits Like a Glove

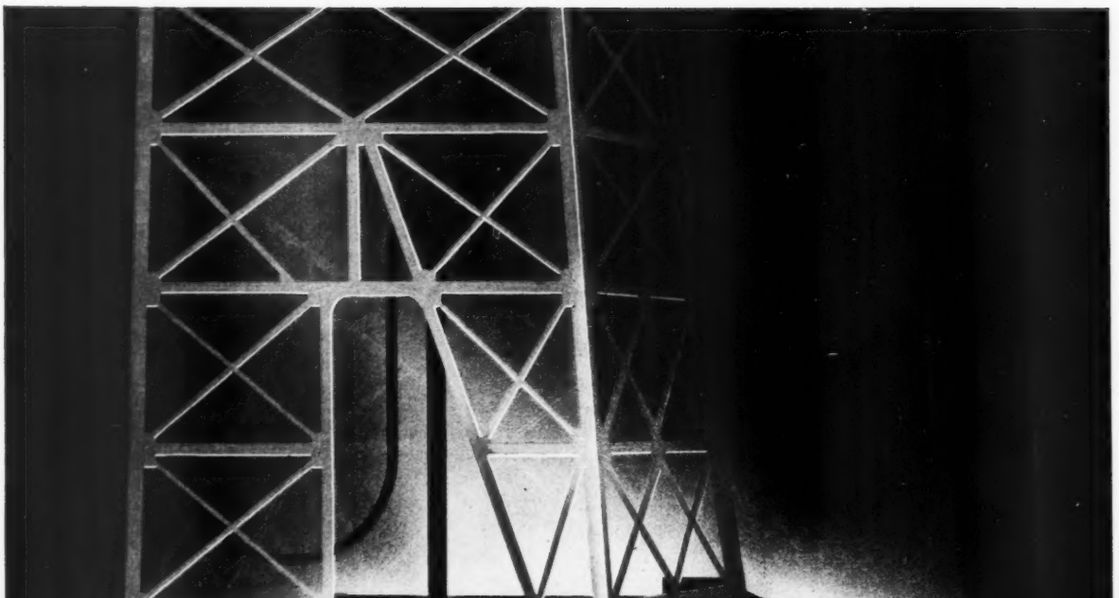
Chart (above) shows how various cements perform under this test. Note that 'Starcor' doesn't begin to stiffen until well past the first hour; note, also, how exactly it meets requirements for maximum pull. This means slow setting, even in deep holes at high temperatures.

That's why 'Starcor' is called the Oil Man's cement. It sets slowly at high temperatures—pumps easily in a heavy slurry—stays gel-like to resist mud contamination—hardens quickly—resists sulphate-water action—assures a long-life shut-off. Use 'Starcor'* next time—it'll pay you well. Any Lone Star and 'Incor'* Dealer can supply you. Lone Star Cement Corporation, Dallas . . . Houston.

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION

Makers of LONE STAR CEMENT • 'INCOR' 24-HOUR CEMENT • 'STARCOR' CEMENT



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MOLY

CUTS COSTS

CREATES SALES

Wellington Pool in Class of Its Own Among Kansas Fields

By DAL DALRYMPLE

The Wellington pool of Sumner County is the wonder oil field of Kansas!

It has no gushers to compare in size with those in some of the more spectacular areas of the state. Its total potential is exceeded by 15 other Kansas pools. It ranks low among major pools in total daily production.

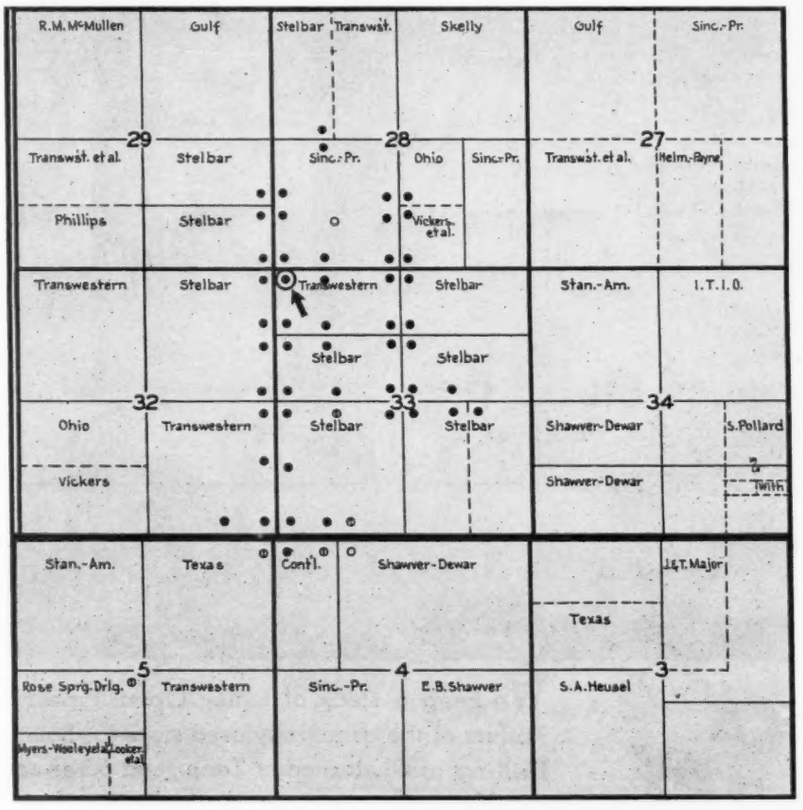
Yet it stands at the head of the class in the matter of consistent drilling, successful results and continuous flow.

In the seven years since the pool was opened, 50 oil wells have been drilled at Wellington, with not one dry hole to mar the record!

What is more, the Wellington wells are flowing wells. A few have been on the pump part time, but at last report all were flowing—resulting in a saving of 20 to 22 per cent by elimination of lifting costs, a condition with which operators are not complaining.

Wellington got off to a slow start. Away back in December, 1929, the pool was opened by Slick, Pryor & Lockhart and associates at No. 1 Peasel, NW cor. section 33-31-1w. It had Mississippi lime-chat at 3,655-67 feet, and had daily initial production of 310 bbls. of oil. Three offsets were drilled and completed as small producers. That ended the little drilling campaign. Purchasers of the crude were scarce, and lack of market delayed further activity. The four wells sat there for several years and nothing was done about it.

Then it was discovered that acid treatment would increase production of lime wells. With that discovery, a new day dawned for the sleepy Wellington area. Acid was applied to the Wellington wells, excellent results obtained and development got under way again, albeit on a conservative, well ordered program.



Trend of the Wellington field, yet to get its first dry hole, is to the south. Arrow points to discovery well.—(Mid-Continent Map Co., Wichita)

THE 1935 REVIVAL

In January, 1935, E. B. Shawver, independent operator of Wichita and one of the leading developers of the Wellington field, completed No. 2 Frankum, SE NE NE section 32-31-1w, south of No. 1 Frankum, one of the original wells offsetting the discovery. It had Chat at 3,652-90 feet, total depth, acidized with 2,000 gallons and flowed 424 bbls. of oil in 24 hours.

Four wells were completed in April, 1935, the largest being the Slick, Pryor & Lockhart No. 2 Peasel, SW NW NW section 33, direct east offset to No. 2 Frankum. It pumped and flowed 303 bbls. of oil in 24 hours after acidizing Chat at 3,660-89 feet, total depth. The other wells were north of the discovery, the most northerly being Shawver and others No. 1 Gaskill, SE NE SE section 29, which made potential of 183 bbls. The other two wells, offsetting No. 1 Gaskill on the south and southeast, produced 225 bbls. and 194 bbls., respectively.

Production was extended one location south in June, 1935, when Stelbar Oil Corp. completed No. 1 Erker, NW SW NW section 33, for 409 bbls. of oil after acidizing. Later that same month, the No. 3 Frankum, offsetting No. 1 Erker on the west, was completed for 278 bbls. of oil.

The next completions were in August, 1935, when Sinclair Prairie Oil Co. No. 3 Kamas, SW NW SW section 28, near the north end of the field, produced 138 bbls. of oil after acidizing, and the Stelbar company (Shawver) got a 483-bbl. well at No. 2 Erker, C N half S half NW section 33, extending production to the east. It was the largest producer to date. A month later the field again was extended east by a still larger well at Stelbar No. 3 Erker, NE SE NW section 33, which flowed 623 bbls. of oil in 24 hours after acidizing Chat at 3,641-89 feet. In October, Slick, Pryor & Lockhart completed No. 3 Peasel, C S half N half NW section 33, north offset to No. 2 Erker, for 639 bbls.

INCREASING IMPORTANCE

Two wells were completed in November, 1935, the first extending the pool one location east at Stelbar No. 1 Barlow, NW SW NE section 33, which flowed 228 bbls. after acidizing. A short time later the northwest offset of No. 1 Barlow, the Slick, Pryor & Lockhart No. 4 Peasel, SE NE NW section 33, was completed as a 1,658-bbl. well after acidizing. Then it dawned on oil men generally that here was a Kansas field of some importance. The final completion of the year was Stelbar No. 1 Peasel, SW NW NE section 33, a 649-bbl. flowing well.

The big development of the field has come this year, one or more wells being completed in each of the 12 months. Although several fair-sized producers were completed in the north part of the field, bigger production was found to the south. The most northerly well has a current potential of only 15 bbls.

Four of the largest wells in the field have been completed along the south edge of the township, in sections 32 and 33. The biggest well to date was the Slick, Pryor & Lockhart No. 3 Murphy, SE cor. section 32-31-1w. It had Chat at 3,640-51 feet, total depth, and flowed 1,185 bbls. of oil in 15 hours, making potential of 2,154 bbls.

Offsetting it on the east is Stelbar No. 13 Erker, SW cor. section 33, which flowed 1,617 bbls. from Chat at 3,626-71 feet, total depth. East of this well, the same operators completed No. 14 Erker, SE SW SW section 33, last month for a potential of 1,755 bbls. of oil.

FIELD EXTENDED

Then, only last week, production was extended west along this same line at Slick, Pryor & Lockhart and others No. 4 Murphy, SW SE SE section 32. It flowed 1,087 bbls. of oil on potential test after acidizing Chat at 3,649-95 feet, total depth.

Another completion of the past week, Stelbar No. 9 Erker, NE NE SW section 33, is indicative of prolific production that may yet be found at inside locations. It flowed 1,495 bbls. on potential test.

The pool recently was extended into the next township south at Continental Oil Co. No. 1 Rothrock, NW cor. section 4-32-1w, which made potential of 1,089 bbls. of oil late in November. The west offset, Texas Co. No. 1 McKee, NE cor. section 5-32-1w, was bottomed in Chat at 3,670 feet and flowed 265 bbls. in 24 hours, but had not been completed.

The December proration report of the conservation division of the Kansas Corporation Commission lists 50 oil wells in the Wellington field, with a total potential of 24,006 bbls.

Operators in the Wellington area haven't made much noise about the pool, but have gone ahead and developed it along conservative lines, studying and mastering the problems it offers and being well paid for their efforts. The limits of the field may or may not be defined during 1937, but many more wells will be drilled at Wellington and numerous large producers may be expected before its limitations are known. As yet, no one can say where Wellington goes from here.

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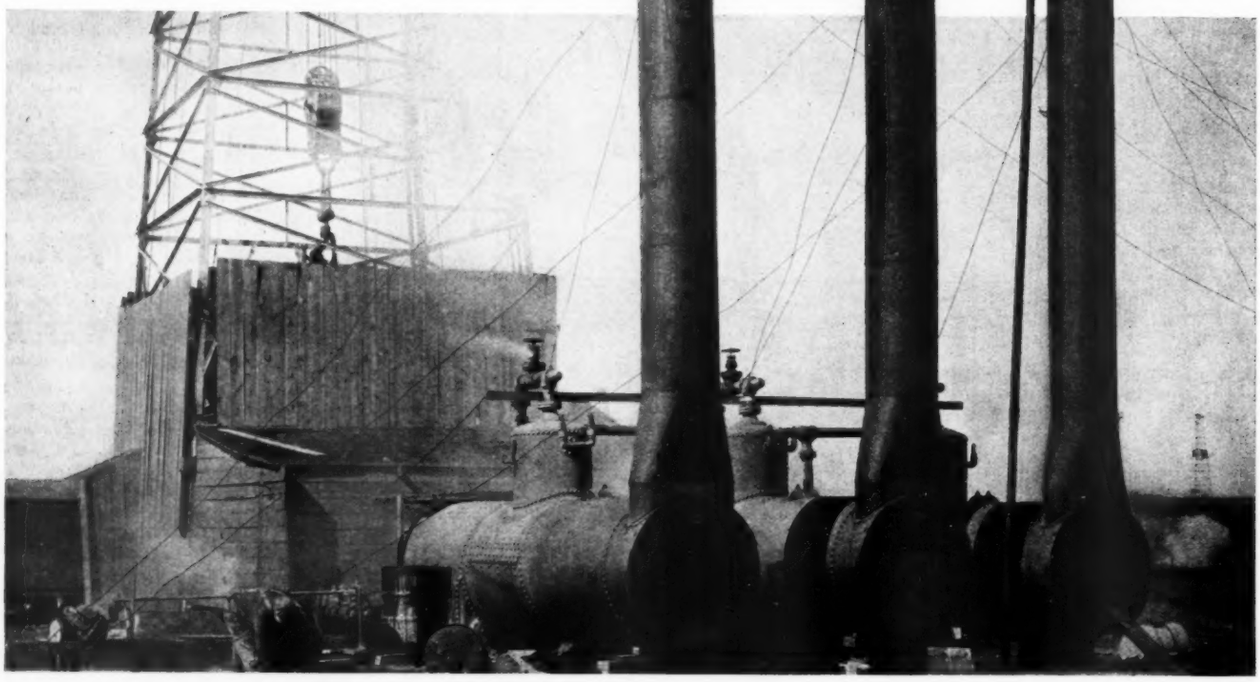

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Oil News from Foreign Lands

Iran's Production in September

The production of crude oil in Iran in September slumped off to its lowest point since April, but the year's nine months' total remains far ahead of the 1935 output at the same time.

September production of 641,000 tons, approximately 4,839,000 bbls., is about 679,500 bbls. less than registered in August when Iran produced 731,000 tons, or 5,519,050 bbls. April with production of 616,000 tons and February with 640,000 tons are the only two months so far this year in which production has been lower than reported for September. However, September, 1936, production of 641,000 tons is considerably above the 1935 figure of 610,000 tons for the same month, indicating that the slump is normal for this period of the year.

Production through September in 1936 totals 46,485,350 bbls. from Iran, compared to 41,811,900 bbls. at the same time in 1935.

The production figures by months through 1936 in terms of tons and convertible into barrels by the factor of 7.55 bbls. per ton, follow:

Month—	1936	1935
January	661,000	630,000
February	640,000	587,000
March	663,000	697,000
April	616,000	584,000
May	768,000	561,000
June	723,000	600,000
July	696,000	607,000
August	731,000	662,000
September	641,000	610,000
Total (9 months)	6,157,000	5,538,000

Submerged Drilling at Baku

The submerged producing structure at Baku, U.S.S.R., has been proved nearly a mile into the Caspian Sea by completion of a well flowing approximately 1,200 bbls. daily. The well is the third drilled in the sea bed and is held to confirm Russian geologists' belief that an extensive reservoir exists under the Caspian north of Artem Peninsula.

Soviet crews have experienced much difficulty in drilling submerged locations. Exploration beyond the shoreline in the Baku district has been under way for several months. Several holes offshore have been abandoned short of their objective due to mechanical failure.

Government Monopoly in Rumania

Provision is made in the new Rumanian mining law for a government monopoly in sale of petroleum products, it is pointed out in the current edition of the Petroleum Press Service published in London. The Rumanian legislature is to soon consider the new mining law and predictions are made in various circles that it will be adopted with only minor changes. While a separate law is proposed to set up the petroleum marketing monopoly, the general mining act proposed provides that "the sale of mineral oils within the country shall be on the principle of refinery quotas through a joint organization under the supervision of the state in which refiners, producers, consumers and the state shall participate."

The Petroleum Press Service relates that more than 80 per cent of Rumanian petroleum products are marketed in foreign lands and takes the position that the country can ill afford to participate in monopoly of internal sales. Attention is called to failure of monopolies of this nature attempted in other countries.

Last spring, the Association of Petroleum Industrialists in Rumania prepared a study of oil conditions in that country and presented figures to the government showing heavy taxation to be stifling trade and to be denying the public use of abundant and inexpensive fuel. It was shown that 11.60 lei which the retail consumer in Bucharest pays for a kilo of gasoline, 8.68 lei or 75 per cent consists of taxes of various kinds, so that only 2.92 lei remains for the producer. The selling price of kerosene consists of 50 per cent taxes, gas oil price includes 72 per cent taxes and fuel oil 44 per cent.

Other provisions in the proposed Rumanian mining law threaten to prevent foreign companies equal opportunity in acquisition of prospective oil lands and drastically restricts the amount of acreage which can be obtained for drilling purposes.

Rumania is currently producing about 157,500 bbls. daily and is the most important European source of petroleum, excepting Russia. The country continues to export more than 80 per cent of its production either as crude or finished products.

Protest Added Taxes

Imposition of additional import taxes on oil in East Hopei by Yin Ju-keng's Japanese sponsored autonomous administration met strong protests last week by Standard, Texas and Asiatic oil companies. Chairman Yin has notified the companies, which were obliged to remove their offices to North China after the Manchukuoan oil monopoly was established, that they must henceforth pay an import duty to his government.

Since oil products imported through Tientsin already pay high import tariffs to the Chinese Central government at Nanking, it is argued that Chairman Yin's additional levy would virtually halt business. Companies are already meeting serious competition from oil smuggled into East Hopei from Korea, Japan and Manchukuo by Korean, Chinese and Japanese smugglers.

The East Hopei administration has suggested to the companies that they can avoid difficulties if they will ship cargoes through Chinwangtao, 100 miles north of Tientsin. It is pointed out that by so changing their shipping routes, the oil companies would be compelled to pay only the East Hopei duties, which are about a quarter of the Chinese customs charges.

Status of Drilling in Venezuela

Deepening of Venezuela Gulf Oil Co. No. 1 Santa Ana, northwest of the Oficiana area in the state of Anzoategui, eastern Venezuela, is being considered by the management, it was learned last week. The test is at present temporarily completed at 6,207 feet as a dry gas well capable of producing approximately 10,000,000 feet per day. Decision on the deepening proposal probably will be made within the next two or three weeks.

Status of other important wildcat tests in eastern Venezuela showed little change last week.

Venezuela Gulf No. 1 El Tigre, east of Oficiana and a little northeast of Standard of Venezuela No. 1 La Canoa, is drilling at 6,226 feet without showings.

Standard of Venezuela has spudded its No. 1 Tabasco (Pantepec), east of Temblador, and was reported drilling below 165 feet. The same company's No. 2 Temblador, a little northwest of the No. 1 hole, is drilling at 3,576 feet. Standard of Venezuela No. 2 El Salto (Pantepec) a little south of the No. 1, which remains temporarily shut down with hole plugged back to around 4,400 feet, is drilling at 1,518 feet.

Stabilization Was Timely

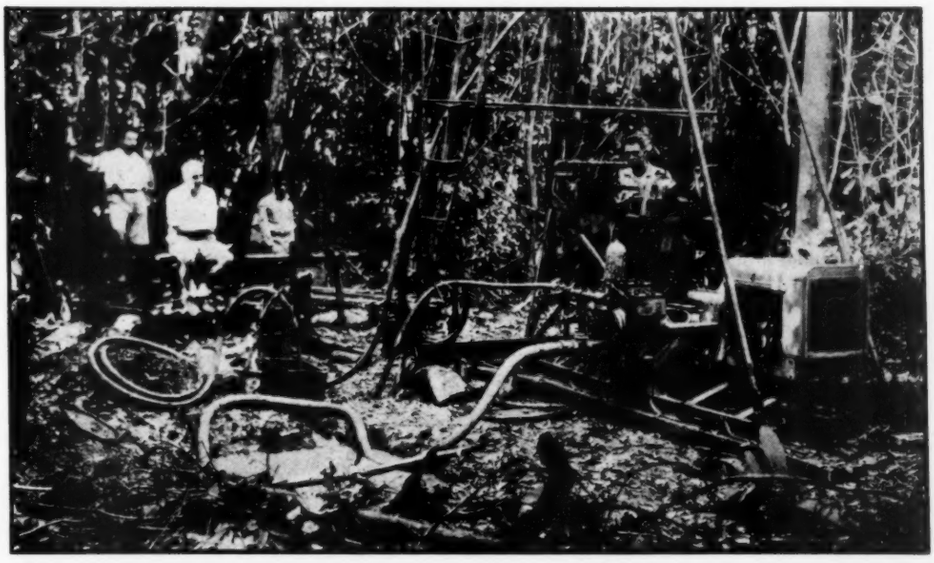
Completion of Iraq Petroleum Co.'s crude oil stabilization and desulfurization plant in the Kirkuk, Iraq, field probably came in time to avert disruption of normal world crude oil movement.

Just before completion of the plant designed to stabilize and desulfurize the Kirkuk field's entire production, municipal officials of Harve, France, withdrew permission to operate pipe lines from the port to refineries on the mainland.

The question of eliminating the offensive and objectionable gases from Havre had been a bitter local issue for months. It was contended that the two per cent sulfur content of Iraq crude oil produced the offensive odors both by evaporation of the more volative ends from crude exposed to the atmosphere and in the refining process.

Bulk of criticism was levied at Cie Francaise des Petroles, French subsidiary of Iraq Petroleum Co., operating the Gonfreville refinery, principally on Iraq crude oil. The company attempted to overcome the objections by injection of caustic soda in each tanker loaded at Tripoli and Haita. Cancellation of the permit to operate pipe lines from the port of Havre to the refinery, which it is understood since has been restored, developed August 14. It was alleged that a cargo of Iraq crude oil was moved to the refinery without adequate treatment for removal or neutralization of the sulfur.

Stabilization of the crude oil at the field, including removal of sulfur, will serve the dual purpose of pacifying Havre municipal officials and reduce corrosion in pipe lines, tankers, terminal storage facilities and refinery vessels.



Core drilling in Netherlands Indies

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Conditional

The first hasty reaction to the crude price increase announced by the Continental Oil Company is being succeeded by a more reflective attitude. The initial impulse was based on the fact of an increase; second thought took notice of the qualifying conditions.

The novelty of a 30-day notice of a crude price increase caused much discussion. The question was asked: "If eventually, why not now?" And the answer, from President Moran's announcement, was obvious.

This new anticipatory form of price increase resolved itself into the shape of a "feeler" which would test the industry's qualifications for it.

It is not a question of the industry being entitled to higher prices for its raw materials and finished products. For it is. The immediate consideration is whether the industry at this time has its house in order to obtain permanent benefits from higher price levels.

Coming at the time it did the announcement produced a phenomenon in the industry; an extensive drilling campaign, higher allowables and an increase in price, three incompatibles all at the same time. Many thought they did not mesh.

A producers association had just deplored the drilling of unnecessary wells in proven areas; fear of a production race between the leading producing states had just been abated by calmer counsels.

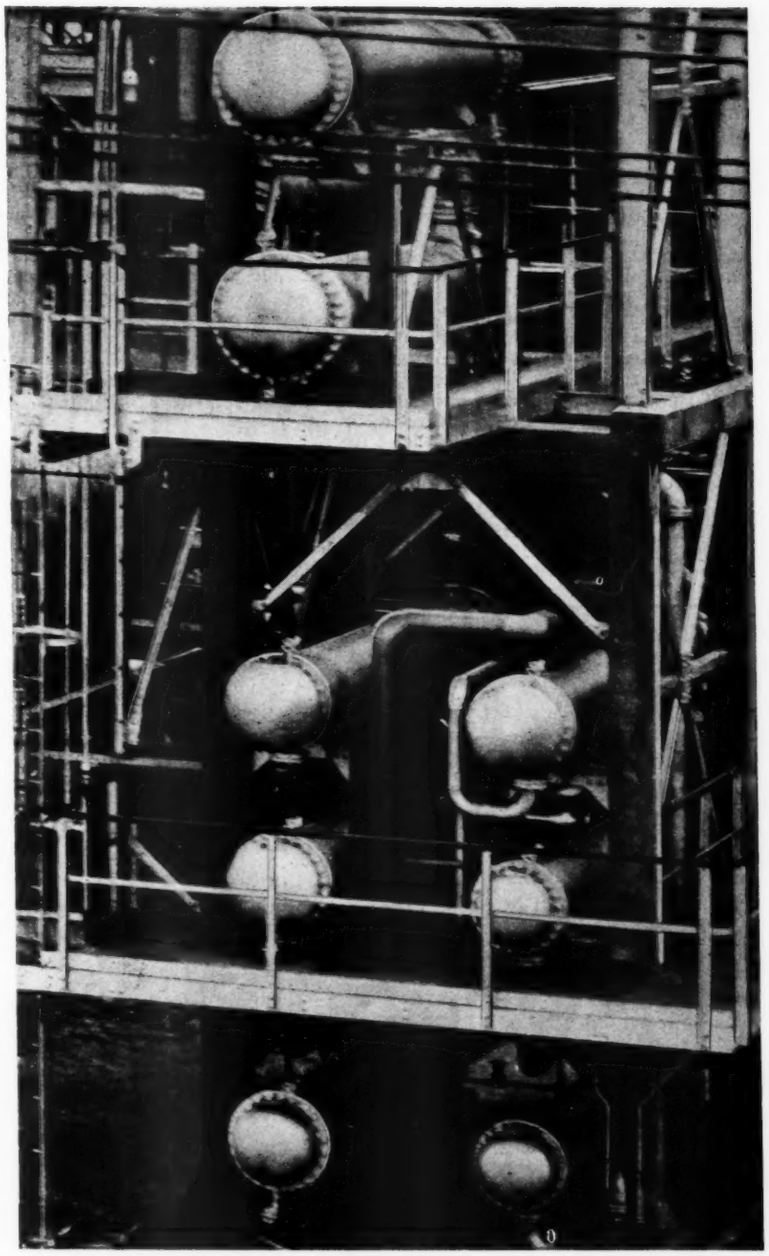
On the other hand, there was general agreement that within the next year the industry will require higher prices for both its raw material and its finished products to meet the steady increase in the cost of everything it has to buy, outlay for labor, and ever mounting taxation.

In addition, there are units which were unable during the years of depression to make needed replacements and modernizations which will now have to be done in the face of these greatly increased costs.

The fact that the industry is enjoying a material increase in demand with every prospect of its continuance in 1937 must be considered with the fact that meeting that increased demand calls for heavier expenditures. The comparative failure to discover enough new oil reserves this year to replace consumption means there must be enlarged expenditures for exploratory work next year as well as expansion in all facilities that will be necessary to supply that larger demand.

All that is true. But it does not stand by itself. As President Moran intimated very pointedly the producing industry must keep its head. It must be prepared to maintain the self-discipline necessary to justify and to hold a price increase. Its course in the next 30 days should show whether it can be trusted with it, whether it "can stand prosperity."

KELLOGG HEAT EXCHANGERS



are installed in the leading refineries both in this country and abroad. ■

This is due to the fact that:

Each unit is designed by engineers familiar with refinery problems. ■

Materials are selected by authorities on metals suitable for refinery operating conditions. ■

Shop facilities are adequate for speedily turning out large quantities of fabricated materials. ■

Work is performed by skilled employees under careful supervision and inspection. ■

Kellogg Heat Exchangers are built according to A.P.I.-A.S.M.E. codes. All welds are radiographed. ■

When in need of heat transfer equipment, contact a Kellogg Engineer. ■

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Unitized Drilling Rig in Wildcat Operation

Unitization and mobility have been factors in the design and assembly of drilling equipment which have been receiving increasing attention. Efforts of operators and manufacturers alike have been directed toward setting up rigs in as few and compact sections as possible, each capable of being moved readily from location to location. Advancement which has been made along these lines has resulted in savings in time and cost of tearing down, moving and setting up rigs, not to mention the convenience in handling.

Developments in this direction are reflected in a new rig which is being used on a deep test being drilled by Texas Gulf Producing Co. at Blue Ridge, Fort Bend County, Texas Gulf Coast. This rig, designed and assembled by W-K-M Co., Houston, is unitized to distribute the aggregate load into three distinct units, the drawworks and rotary unit, the mud-pump unit, and the sectional demountable derrick.

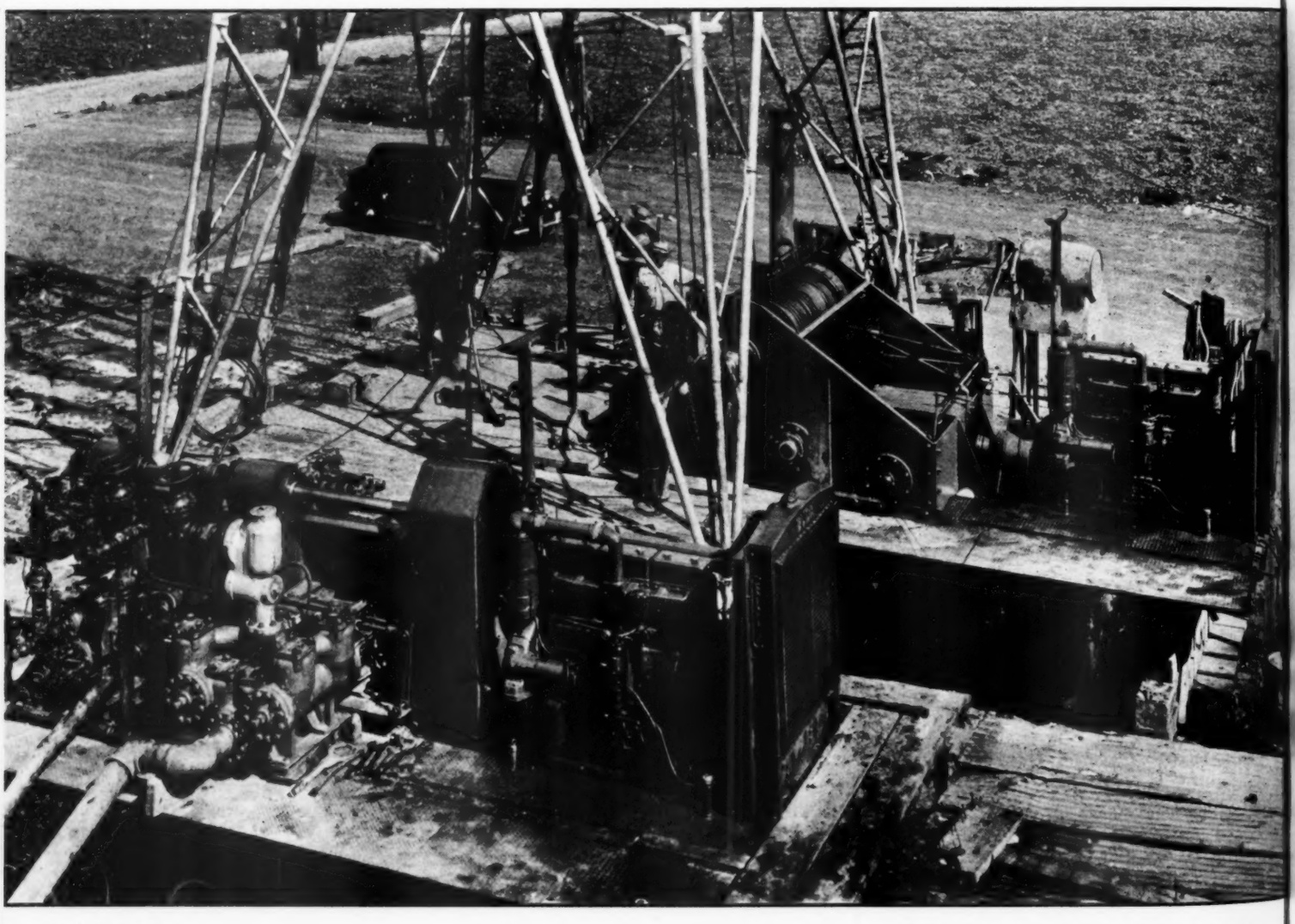
To provide the utmost in mobility, the drilling unit and the mud-pump unit are mounted permanently on semi-trailers, which are pulled by trucks. The derrick, demounted in sections, can be transported easily on a pole-type oil-field trailer. It is composed of 12 angular sections of tubular-welded construction with a height of 72 feet and a base of 20 feet. On the trailer, the total length of the load is 40 feet with height and width within road limits.

CONSISTS OF THREE UNITS

Although condensed into three main units and readily movable on trailers, the rig is designed to drill to depths of as much as 6,500 feet, using 3-inch drill pipe. Assembly of equipment adequate to meet deep drilling requirements, and yet easily portable without dismantling, has been one of the problems in mobility. Within proven areas, unitization has been carried to a high degree in heavy drilling equipment, but in most instances movement of such equipment is limited to local areas, and for long hauls the sections have to be broken.

This new rig, the first of its type, was intended primarily for use in exploration drilling in unproved areas; particularly those in removed and scattered places where the units could be moved readily without tearing down and setting up, and with a minimum of handling. With diesel engines it can operate in places where sufficient fuel for other forms of power would be difficult to obtain. However, the practicability of such a rig in more accessible regions is demonstrated in its use at Blue Ridge, one of the Gulf Coast's old salt dome fields.

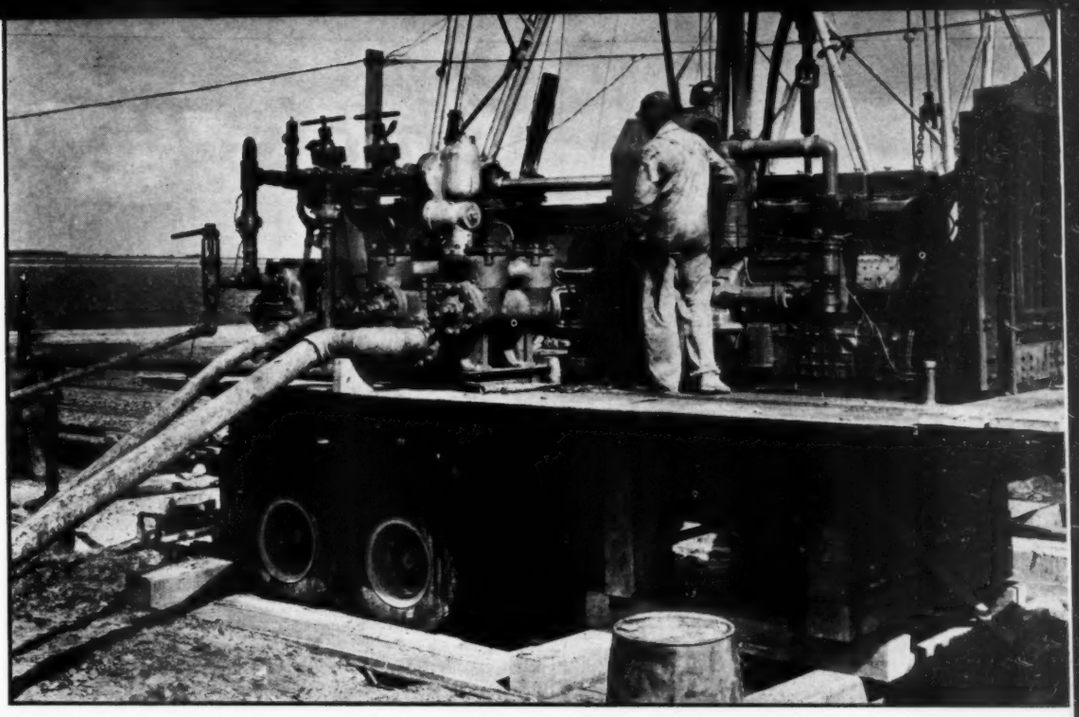
Assembling on trailers of drilling equipment capable of drilling to such depths as 6,500 feet has necessitated special attention being directed to minimization of weight of the equipment and to compactness. As this rig is assembled, total weight of the drilling unit is only 42,000 pounds and that of the



The new portable deep-drilling rig on location at Blue Ridge, Texas Gulf Coast, showing the drilling and mud-pump units mounted on semi-trailers. The rig is designed to drill to 6,500 feet

Used

By NEIL WILLIAMS



Portable mud-pump unit mounted on semi-trailer, the unit being supported by cribbing to reduce the load carried by the wheels and give added stability

pump unit, 30,000 pounds. To facilitate weight reduction was one reason diesel engines were used, such engines being considered as capable of developing greater power per pound of weight than most other prime movers.

The engine of the drawworks and rotary unit is a full diesel 909-cubic-inch motor, having 156 horsepower at 1,200 r.p.m., driving through a fully enclosed reduction and transmission gear box. Heavy-duty friction clutches are employed between the gear box and chain drive to the drawworks, and line shaft to the rotary. The drawworks is of the two-speed and reverse type, chain driven. Transmission shafts are mounted throughout on antifriction bearings. The hoisting drum has a capacity of 4,125 feet of 7⅝-inch cable. The sandline drum has a capacity of 8,160 feet of 5-inch cable. The whole unit with the rotary is self-contained.

The semitrailer on which the unit is mounted has a 25x8-foot bed. It is equipped with dual tandem axles, 36x8-inch high-pressure tires, hydraulic landing and leveling gear and full universal fifth wheel. It has a gross capacity of 45,000 pounds. About 25 per cent of the load is supported by the fifth wheel. A fuel tank for the diesel engine is specially constructed in the frame. Demountable steel-deck platforms are attached to the main frame on both sides and rear to provide floor space for the driller and crew. It has hydraulic brakes on one of the dual axles.

PUMPING EQUIPMENT

Included in the pump unit are two standard pumps, a 6x12 Wilson-Snyder and an auxiliary 4½x10 Gardner-Denver. These are powered by a full Buda diesel motor identical with the drilling unit engine. A "V"-belt drive is used between the motor and the special split line shaft mounted on roller-bearing blocks, which provide for the operation of the pumps simultaneously or independently, the pumps being driven from the line shaft.

The trailer on which this unit is mounted has a bed 18½ feet long and 6 feet, 8 inches wide. The axles, tires, landing gear and fifth wheel are identical with those of the drilling unit. It also is equipped with hydraulic brakes on one of the dual axles.

Truck equipment for each trailer consists of a White model 718, 172-inch wheel base, 5-ton capacity truck, equipped with dual tandem axles and 20x9¾, 14-ply tires on the rear, and 36x8, 12-ply tires on the front. Each has air brakes actuating on all truck wheels and on the front wheels of the trailer.

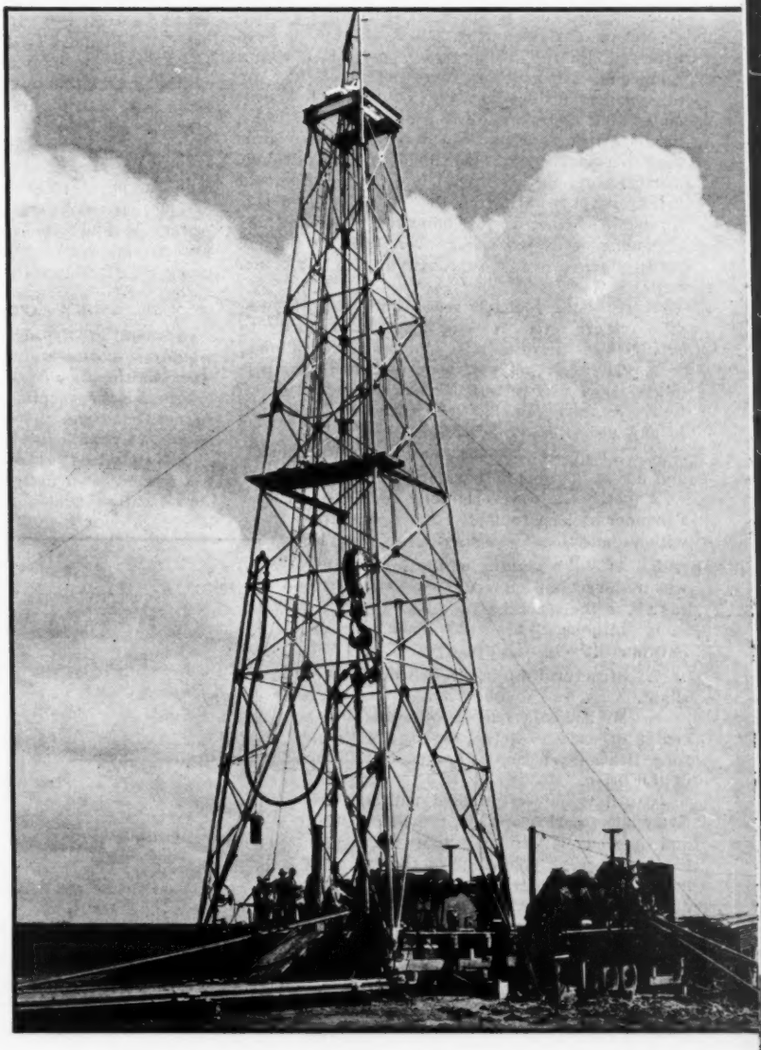
In setting up the rig, the drilling unit trailer is pulled onto location and the hydraulic landing gear let down on the base provided. The landing gear permits raising the load off the wheels and leveling of the unit. The automatic full universal fifth wheel permits rapid release of the truck from the trailer so that the truck can be available for other use. The derrick floor and base then are set up around the unit and the derrick assembled and the lines strung through the blocks. The pump unit is pulled into place at the side, and with its landing gear down, the truck released and the mud and water-line connections made, the rig is ready to run. To provide additional support cribbing can be built up under the ends of the trailers. This will usually be done during the shut-down periods while waiting for the cement to set around the surface casing.

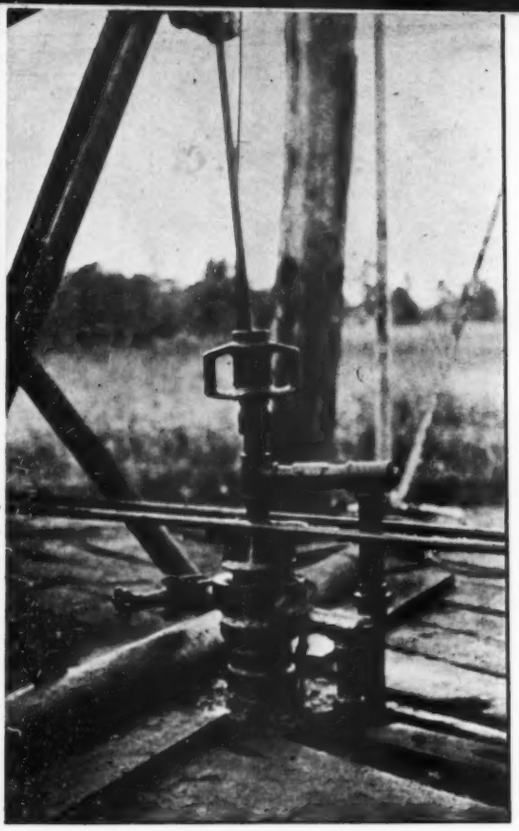
The derrick is set on a substructure built of timbers so that the floor level is about 6 feet above the ground level, while the steel bearing-plates at the base of the legs of the derrick rest on timbers 3 feet above ground level. No concrete is used in building foundations for derrick. While this, of course, does not provide as solid a foundation as would result from the use of concrete corners, it does bring about a considerable saving in construction time and costs. Also, concrete corners for a drilling rig generally have to be removed before a pumping derrick can be erected, and this causes additional expense. Concrete is used to support the walls of the cellar, which is about 8 feet deep. Concrete is also used in the runways. Due to smaller casing sizes, the cellar space necessary for connection is smaller. Mud pits used are long and rather narrow in order to provide large settling space with a minimum of excavation work necessary.

Outstanding features of this rig are its light weight and the ease with which it can be made up or broken into its 12 angular sections

The tires, which must be left on the trailers while drilling is in progress, are subjected to deterioration which would normally be considered out of proportion to the road service rendered by them. However, this condition can be easily corrected by covering them with some material which will protect them from sunlight and keep oil and other injurious substances from being spilled on them. By properly caring for them the rate of deterioration could be reduced nearly to that taking place in warehouse storage.

Drilling was started in the Blue Ridge test, No. 14-B Blakely, the latter part of October. At latest report as this is written, it was down 5,350 feet in shale with no difficulties having been encountered to date.





Gas input well equipped for pumping

Ohio's Repressuring Ultimate Recovery of

By MITCHELL TUCKER

Lower lifting costs, more rapid recovery, and more complete recovery are the usual objectives of repressuring, all of which have been achieved in the Haynesville pool of northern Louisiana. After seven years of successfully repressuring the Blossom sand in this pool it is estimated that approximately 3,500,000 bbls. increased ultimate recovery has been obtained to date over that reasonably expected under normal decline. Furthermore, the additional increased ultimate in future years is estimated to equal or exceed this figure. The increase is indicated from the 237 producing wells extending over 3,600 productive acres which are now repressured by 32 injection wells.

Some of the probable reasons why the Haynesville reservoir has responded so satisfactorily to artificial gas drive may be enumerated as follows:

1. The close unity of lease ownership has permitted cooperative effort necessary in such projects.
2. A fairly thick, well saturated, and uniformly porous sand is present.
3. Water occurs only as edge encroachment, and not as "bottom-hole water."
4. All wells were originally completed in such a manner as to permit effective repressuring without additional expense.
5. At the beginning of the project there was no longer an appreciable amount of free gas above the general oil level.
6. Lithologic character of reservoir rock is comparatively uniform.
7. Structural dip in all directions is very slight.
8. Methodical spacing of wells in the center of each 10 acres, together with uniform lithology, permits an even distribution of the drive.
9. All wells were drilled within a relatively short period of time, preventing heavy and uneven withdrawals that might later have encouraged "blowing" of the repressuring agent through the more thoroughly drained sections of the sand.
10. Gas has been employed as repressuring agent exclusively, with all the well recognized advantages over air accruing to the Haynesville project.

The field was discovered in 1921 and underwent rapid development until 1924, accompanied by premature dissipation of formation gas. Initial productions ranged as high as 8,000 bbls. per day. The pay horizon is the Blossom sand (Ozon formation of Upper Cretaceous) lying at about 2,800 feet. It occurs at Haynesville in a dome-shaped anticlinal structure having an east-west trend, with slightly dipping beds to the productive limits in all directions. The producing area of the field is about 6 miles long (east to west) and 3 miles wide (north to south).

Average sand thickness is about 30 feet. No coring was carried on during the development of the field, and detailed records of the lithological character of the Blossom sand is not available. This same oil zone at Cotton Valley, some 16 miles southwest, was cored during its later development and indicated some interstratification of shale streaks, which in all probability persist at Haynesville. However, no highly permeable streaks have been noted which would encourage bypassing or "blowing through." Two porosity tests were later made from wells situated near the center of the field, both of which indicated 24 per cent pore space. No permeability tests of this sand have been made.

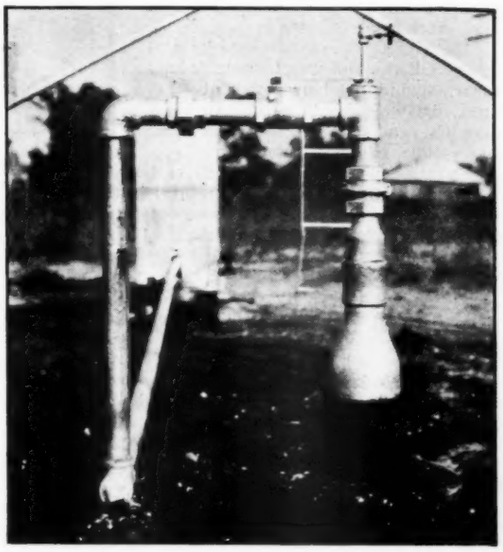
Due to the lack of early porosity and saturation determinations, no reliable estimates of original oil content or percentage recovery can be made. To date recovery per acre has been approximately 10,000 bbls.

Early gravities tested from 34 to 34.5 degrees A.P.I., while crude recovered by repressuring later displayed gravities of from 35 to 35.5 degrees A.P.I.

The presence of some water does not present a major problem as it occurs in the form of edge encroachment rather than as bottom-hole water. Possibly the reestablishment of reservoir pressure has served to check this ingress of water along the flanks of the field.

EARLY EXPERIMENTAL WORK

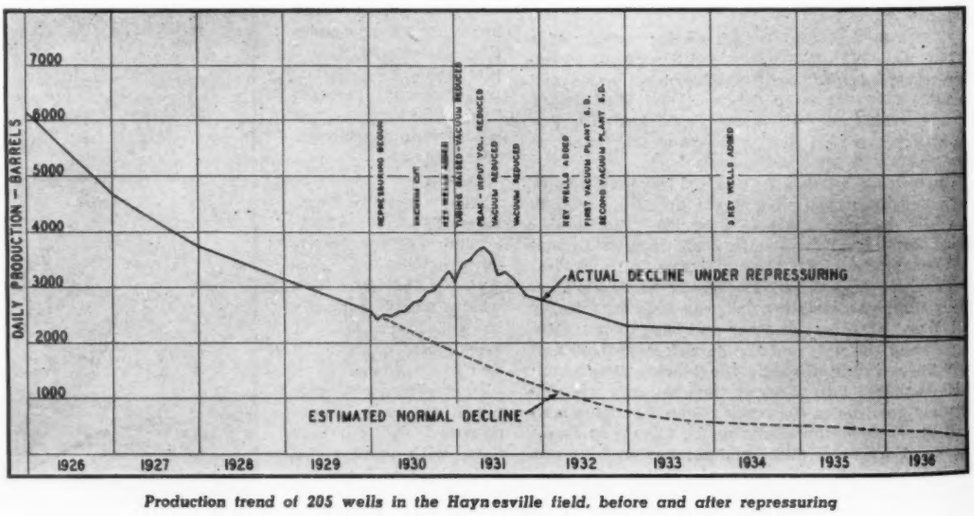
Instead of the detailed core analyses which would be normally expected today, experimental work in the field was begun in August, 1929, to determine the reaction of fluid in the reservoir to artificial gas drive. The accompanying map shows the two experimental wells in section 15 (double circled) into which about 35,000 feet of gas was injected daily from August to December, 1929, while vacuum on surrounding wells was gradually reduced. Near the end of the year favorable results were conclusively observed, indicating that the sand body had sufficient effective porosity and remaining saturation to permit an effectual gas drive. Having such satisfactory evidence at hand, the experimental work was discontinued and steps immediately taken to repressure.



Repressuring line and gas input well

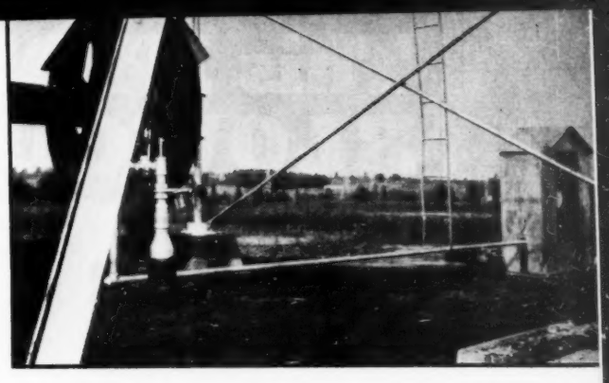
A cooperative agreement was entered into between Ohio Oil Co. (operating partnership properties with Gulf Refining Co.), Louisiana Oil Refining Co., and Reserve Petroleum Co., for this extensive project. Ohio later purchased the properties of the Reserve Petroleum Co. This group of operators controlled 3,640 acres in the central and western portion of the field, covering the most prolific section, and this area only has been repressured.

Vacuum was first applied to the field in the fall of 1923, and continued up to the beginning of the pressure drive project in February, 1930. Vacuums as high as 26 to 28 inches were being pulled in some instances. These were slowly re-



Production trend of 205 wells in the Haynesville field, before and after repressuring

Project Increases Haynesville Field



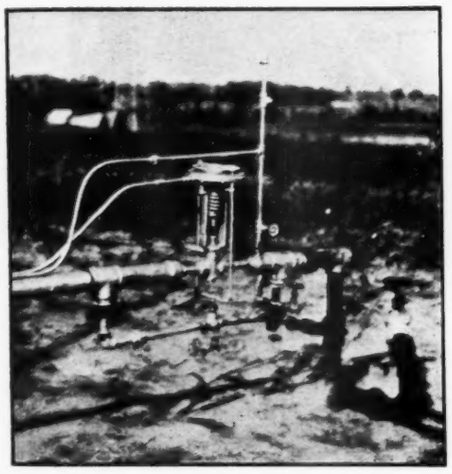
Meters for recording the volume of gas being used are installed in the line leading to each of the input wells

duced (by gradually reducing the size of orifice flange plates) as input volumes were increased to prevent no declines in daily production, and to accomplish the gradual change-over. As a result of the vacuum which had been drawn for several years, and the early depletion of formational gas, very little free gas was present above the oil level in the reservoir. This made a favorable repressuring condition.

LOW PRESSURE AREA

Another subsurface condition which had to be met was the apparent low pressure area in the center of the field (see accompanying map), which was at one time the most prolific portion of the field. More rapid depletion of original pressure here, and greater effectiveness of the vacuum in this more porous section, served to bring this condition about. Slow withdrawal of vacuum, replaced by repressured gas, has worked toward equalization of the entire reservoir.

At the beginning of the project in February, 1930, 13 key or injection wells were employed.



Instrument for controlling gas flow to wells

Careful check was maintained on the increasing amounts of input gas returned to the sand, and results from all portions of the field. Automatic differential recorder-controller instruments, or volume controllers, were installed at all input wells. The observed pressure and volume requirements served to indicate the need for additional injection wells in certain areas, the possibility of reducing vacuum or increasing pressure in others, or occasionally the feasibility of changing or adjusting injection wells when by-passing or channeling was evident. In other words, the field served as the experimental laboratory during the early stages of this project to determine the most efficient volume-rate (mass velocity) for the system. Such experimentation was doubly necessary in the absence of accurate data on physical characteristics of the producing sand. By this careful study of individual wells and their reaction to vacuum and pressure changes, the field was completely changed over from a vacuum to a pressured reservoir in less than three years.

Theoretically, the most efficient spacing of gas-drive wells, and the ratio of pressure to producing wells, should depend upon the permeability and thickness of the sand, and the volume-rate to be employed. At Haynesville, however, experience, and the desire to expand the system, prompted the gradual increase of input wells from the original 13 to the present number of 32. (See accompanying map for present input wells.)

Originally gas was injected down the casing, but it was found later that better results were obtained by leaving the rods and tubing in pressure wells, and repressuring through the annular space between the casing and tubing. In some instances it has been found advisable to leave pumping equipment at the pressure wells and pump them out with clear water occasionally to remove clogging deposits of salt.

Dry gas has been used for injection purposes since the inception of the project. No doubt the use of this agent instead of air has contributed to the success of the drive, as such physical properties as viscosity and surface tension have not been adversely affected by the recycle.

Injection gas has been obtained from the field itself, or from deep sand wells at Cotton Valley some 16 miles to the southwest, or purchased locally from the North Louisiana Gas Co. Total daily input gas averaged 1,649,000 feet last month. Present average daily volumes per well amount to 66,000 feet, ranging from a minimum of 9,300 feet to a maximum of 180,000 feet per well. The recycle of gas through the sand seems to be exceptionally high, for during a recent check the monthly input amounted to 51,000,000 feet, while gas recovered amounted to 45,000,000 feet. Thus only 6,000,000 feet was lost to the sand, lost in transit to and from plants to wells, etc. Recovered gas is pulled to the gasoline plant, extracted and returned to the field for consumption, or to injection wells for recycle through the reservoir.

INJECTION PRESSURES

Injection pressures range from 30 to 150 pounds, depending upon volumes, sand thickness, tightness, etc. Experience gained through close checking and supervision has served to establish the most effective volume and pressure in each instance.

The expense of delivering gas to injection wells at the required pressure has sometimes been excessive in similar repressuring projects, but not so at Haynesville. One 9½x12 compressor driven by a 110-horsepower engine provides sufficient pressure to the gas from the field and that coming from Cotton Valley. All deliveries of purchased gas are made at 180 pounds pressure, ample for injection at any part of the field.

The customary construction of wells during early development included the setting of a 6-inch string of casing from 50 to 100 feet above the pay zone, and cemented to effect a complete shutoff of all upper formational water. No appreciable amount of reconditioning in either input or producing wells has been necessary incident to the application of pressure drive.

Accurate daily production figures from 205 wells (those operated by Ohio Oil Co.) are available before and after the repressuring period. The accompanying decline curve exhibits production trend for this group of wells. Declining from an average of 6,132 bbls. daily in January, 1926, a low of 2,410 bbls. was reached in February, 1930, or a yearly percentage decline of 15 per cent. The application of actual repressuring was begun in the latter part of February, 1930, with daily production averaging 2,410 bbls. The production exhibited a steady increase until April, 1931, when a peak daily average of 3,710 bbls. was reached.

In as much as one of the objectives of this project was to avoid the future use of vacuum, and also to check decline and increase formation pressures, it was decided to slowly reduce input volumes, and thereafter maintain only constant gas drive on the producing wells. This was further advisable in view of the danger of by-passing and possible trapping of otherwise recoverable oil through more porous sections if too large and constant volumes were injected. Today, after seven years of building up reservoir pressure, daily average from this same group of wells is 2,060 bbls.

During the time the field operated under high vacuum, sand abrasion, affecting cups and metal pump parts, constituted a major portion of the well trouble and lifting costs. This item of expense has been substantially reduced by the change from a vacuum to a pressured reservoir. Clean-out and work-over jobs have also been materially reduced.

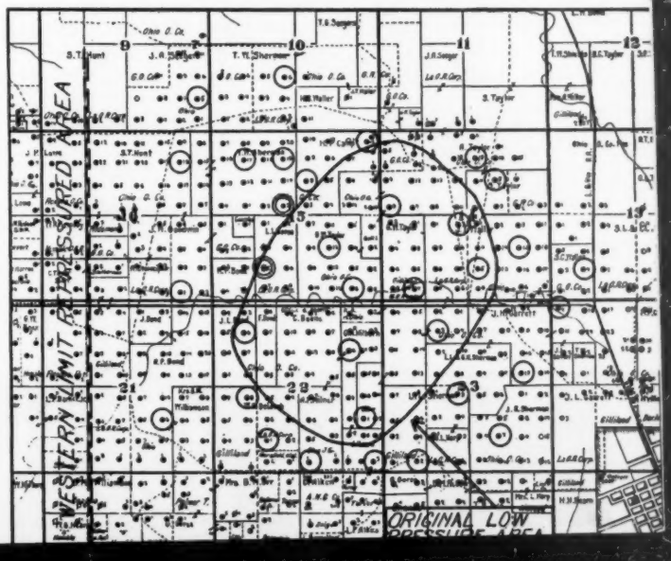
A rough estimate of probable increased production due to repressuring from the 237 producing wells would reasonably be within the neighborhood of 3,500,000 bbls. to date. In future years, as production continues to be sustained far above normal expected decline, present increased production due to repressuring will mount much more rapidly, as under normal decline many of the wells would have reached or be closely approaching their economic life.

Growth of Automobile Trailers

Phenomenal growth of automobile trailer traffic is creating new business and new problems for service stations, reports Amos Ball, general manager of sales of Standard Oil Co. (Indiana).

'It is predicted that a million trailers will ride the highways of the United States in 1937," Mr. Ball said in an interview. "That is 10 times as many as were in circulation only a little more than a year ago. It will mean that 3,000,000 new American pioneers who travel, sleep and eat in modern 'covered wagons' will be to a high degree dependent on service stations as their bases of supplies. Operators are sure to do as much of their purchasing as possible at stations which offer them proper inducements."

Area included in the Haynesville repressuring project. Double circled wells indicate original input wells, and single circles indicate present input wells—(Globe Map Co., Shreveport)



This HYDRIL AUTOMATIC BLOWOUT PREVENTER

Makes Your Well

. . . COMBINES ALL FUNCTIONS OF BLOWOUT PREVENTER, SQUARE KELLY PACKER, DRILLING PACKER AND STRIPPER WITHOUT CHANGE OF THE PACKING ELEMENT.

- Automatically operated by well pressure.
- Auxiliary manual control.
- Packing element closes IN DIRECTION OF FLOW.
- Same packing element packs off around square, eight-sided or round kelly, tool joints, casing protectors, drill collar, casing or tubing couplings as effectively as it seals around the pipe.
- Maintains secure, safe seal while any of the above members are being rotated, run into or pulled out of the hole through the set packer under high pressures.
- Packing element automatically accommodates itself to varying diameters of drill-string members. No manual operation necessary while running in or pulling out of hole.
- As many as 4000 A. P. I. tool joints have been pulled through a single packing element without diminishing its sealing ability.
- Octagon kellys have been rotated in the set packing element for 90 hours under 250 to 1200 pounds pressure without replacement of unit.
- Made in three body sizes. Packing elements have a pack-off range from $1\frac{1}{2}$ to 9 inches.
- Installed beneath any type of rotary, singly or in multiple. Occupies minimum of cellar space.

Fully Patented

HYDRIL

ontrol ITSELF!

HOW THE HYDRIL AUTOMATIC BLOWOUT PREVENTER OPERATES

The Hydril Automatic Blowout Preventer gives the operator a safe, automatic and instantaneously effective means of PREVENTING BLOWOUTS while drilling, casing, tubing and pulling live or flowing wells. It efficiently replaces the many different packing devices heretofore required for the various operations between spudding-in and final completion of the well.

SEALS IN DIRECTION OF FLOW

This Blowout Preventer closes in the direction of the flow of gas or fluid from the well. Its operation is automatic, instantaneous and positive, and the single heavy packing unit packs off around a tool joint, coupling, square kelly, drill collar or member of any other shape within its bore as effectively as it seals around the pipe.

The Blowout Preventer body contains a vertically movable piston into which fits a tapered reinforced rubber packer of a special resilient composition. The normal bore of the packer is large enough to allow the free passage of the tool joints on drill pipe and couplings on casing and tubing. The packer is automatically compressed securely around the object within its bore by the upward movement of the piston under well pressure, the seal becoming tighter as the pressure forcing the piston upward increases. Adjusting screws in the Blowout Preventer head are set to limit the upward travel of the piston. In this way the compression of the packer is controlled and the tightness of the seal regulated.

USED WITH ANY TYPE OF DRILL PIPE CASING AND TUBING

The Hydril Automatic Blowout Preventer allows ordinary drill pipe tool joints or casing and tubing couplings to be pulled out or run in through the securely set packer UNDER HIGH PRESSURES without hindrance, loss of sealing efficiency or damage to the packing unit.

As the tool joint is pulled upward against the packing rubber the piston moves downward automatically, allowing the resilient packing rubber to accommodate itself to the tool joint diameter. The pressure in the well acts as a spring cushion to hold a predetermined sealing pressure against the tool joint or the pipe without varying the outside pressure. The downward movement of the piston is automatic and positive whether the tool joint is being pulled up or run down through the rubber, the adjusting screws being set to maintain the proper sealing pressure.

The piston may be actuated at the will of the operator in either direction by the pressure in the well or by pressure from pumps or any other suitable outside source. Complete manual control of the upward and downward movement of the piston is always provided for.

AUTOMATIC BLOWOUT PREVENTION

Where the equipment is intended principally as a safeguard against possible blowouts, the automatic functioning of the Blowout Preventer removes the human element. In the absence of pressure from the well, the packing element offers no obstacle to running and pulling the drill stem and the Blowout Preventer requires no attention to keep it in full working order. Any tendency of the well to flow, however, instantly raises the piston and compresses the packer around the kelly, drill stem, tool joint or drill collar.

With the packing unit thus tightly set, any part of the drill string may be rotated as well as pulled up or lowered. This invaluable feature allows the operator to continue drilling, circulating, or to pull out of the hole with entire safety, thus avoiding the danger of sticking his drill string. Should the pipe be part way out of the hole when a threatened blowout automatically sets the packer, the drill string may be run back to bottom in order that a drilling mud, containing a minimum amount of weight material, may be used to kill the well.

PRESSURE DRILLING AND COMPLETION

Every well-head packing need during controlled pressure drilling and pressure completion work is served efficiently by the Hydril Automatic Blowout Preventer. The constant, positive seal maintained around any of the elements of the drill string or casing and the freedom with which they may be rotated, run into or pulled out of the hole insures maximum safety and speed of operation. The heavy, resilient packing rubber gives long service and any wear is automatically compensated for by the upward movement of the piston under the well pressure.

TUBING AND PULLING LIVE WELLS

The Hydril Automatic Blowout Preventer is an efficient "stripper" for tubing and pulling live wells. It seals off around the body of the pipe and the couplings with equal effectiveness. The automatic action of the piston in preserving a constant seal of the packer when passing couplings, described above, speeds up the work and insures maximum safety from blowouts.

HYDRIL COMPANY

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PACKING ELEMENT

This is the sturdy, scientifically reinforced one piece rubber packer of the Hydril Automatic Blowout Preventer. It is made of a tough, extremely resilient compound that is highly resistant to abrasion. This packer is proportioned to provide a large reserve of material in order to insure long, safe service under the most severe operating conditions.

utomatic **BLOWOUT PREVENTER and DRILLING PACKER**

New Mid-Continent Shoestring Fields Indicated by Survey

By N. WOOD BASS and W. REESE DILLARD*
U. S. Geological Survey

Undiscovered shoestring sand oil fields south of the South Burbank field in Osage County, Oklahoma, and in Cowley and Butler counties, Kansas, are indicated to exist by recently completed work by a field party of the U. S. Geological Survey. The most favorable locality for prospecting for new fields of this type is a narrow strip of country extending nearly due south from the South Burbank oil pool in Osage County (Figures 1 and 2). A second area that probably contains undiscovered oil fields of the shoestring type is in south central Cowley County, Kansas, southward from the Burden oil field to the Kansas-Oklahoma boundary. A third prospectively valuable region is a relatively broad strip of country in Kansas extending southwestward from the Scott oil field in western Greenwood County across northeastern Butler County to the Smock-Sluss oil field southeast of Eldorado. Several wells in the general area have found some Burbank sand, which has yielded water in some wells and shows of oil in other wells. In as much as wells at the south margin of the Scott field and locally elswhere in the region produced water in the Burbank sand, the occurrence of water in the few wildcat wells does not prove that undiscovered oil fields are not lying close by.

Drilling depths to the Burbank oil sand should be about 2,800 feet in the Osage County area, 3,000 feet in Cowley County and 2,700 to 2,800 feet in Butler County.

The recent investigation indicates that the belts of narrow elongated oil-bearing sand lenses at the horizon of the Burbank sand (commonly called Bartlesville sand) should be expected in each of the three localities mentioned above. The individual sand lenses—and therefore the oil fields also—likely have an offset or en echelon arrangement within the belts, and are separated by narrow gaps barren of oil. A sketch showing the hypothetical position of the undiscovered sand lenses is shown in Figure 2. The sketch should not be taken literally, however. It merely represents a general scheme that can be followed in prospecting the areas, but the positions of the hypothetical sand lenses are not necessarily shown correctly. In other words, the sketch indicates the general area that is prospectively valuable, but it is not meant to be used as a guide for locating wells. A study should be made of the Burbank sand horizon in the logs of all wells in a narrow belt of country in Osage County, Oklahoma, south of the South Burbank field; in another belt through the middle of Cowley County, Kansas, between Burden oil pool and the Kansas-Oklahoma boundary, and in a third belt in Butler County between the Scott oil field and the Smock-Sluss oil field. Then the positions of the hypothetical sand bodies shown in Figure 2 should be shifted to conform with the information disclosed in the well logs. The details of the sketch should be modified further as information concerning the distribution of the sand lenses is found by the drilling of additional wells.

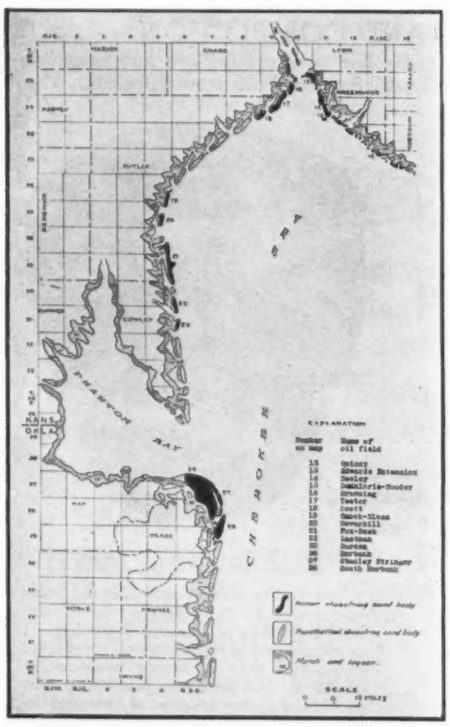


Fig. 2.—Sketch of parts of Oklahoma and Kansas showing the hypothetical distribution of sea and land during the time many of the Burbank sand lenses were formed as barrier beaches on the western shore of the Cherokee Sea

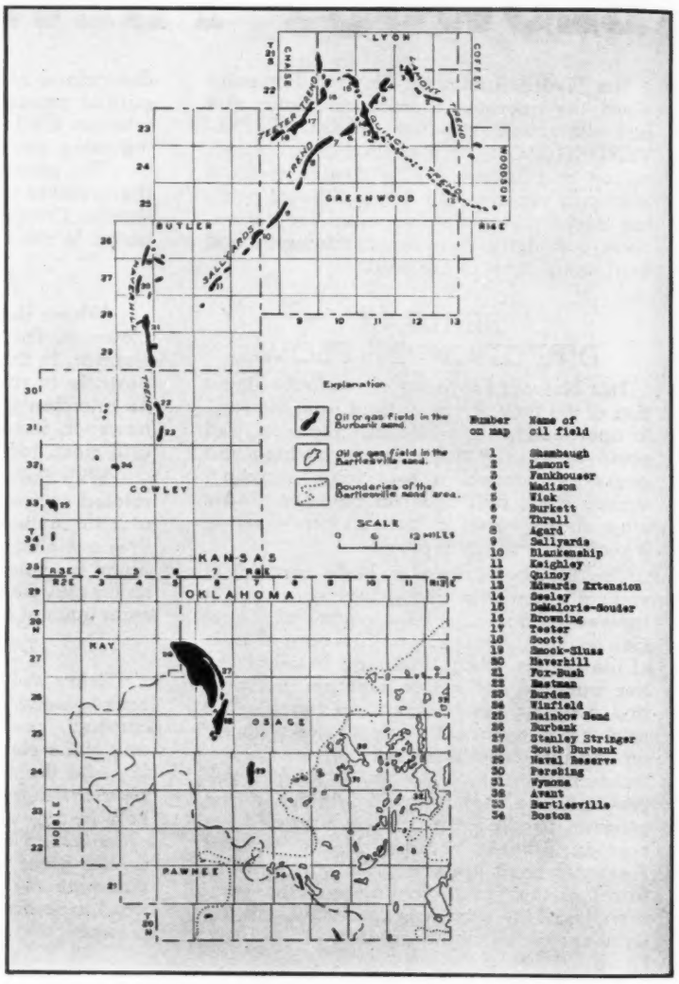


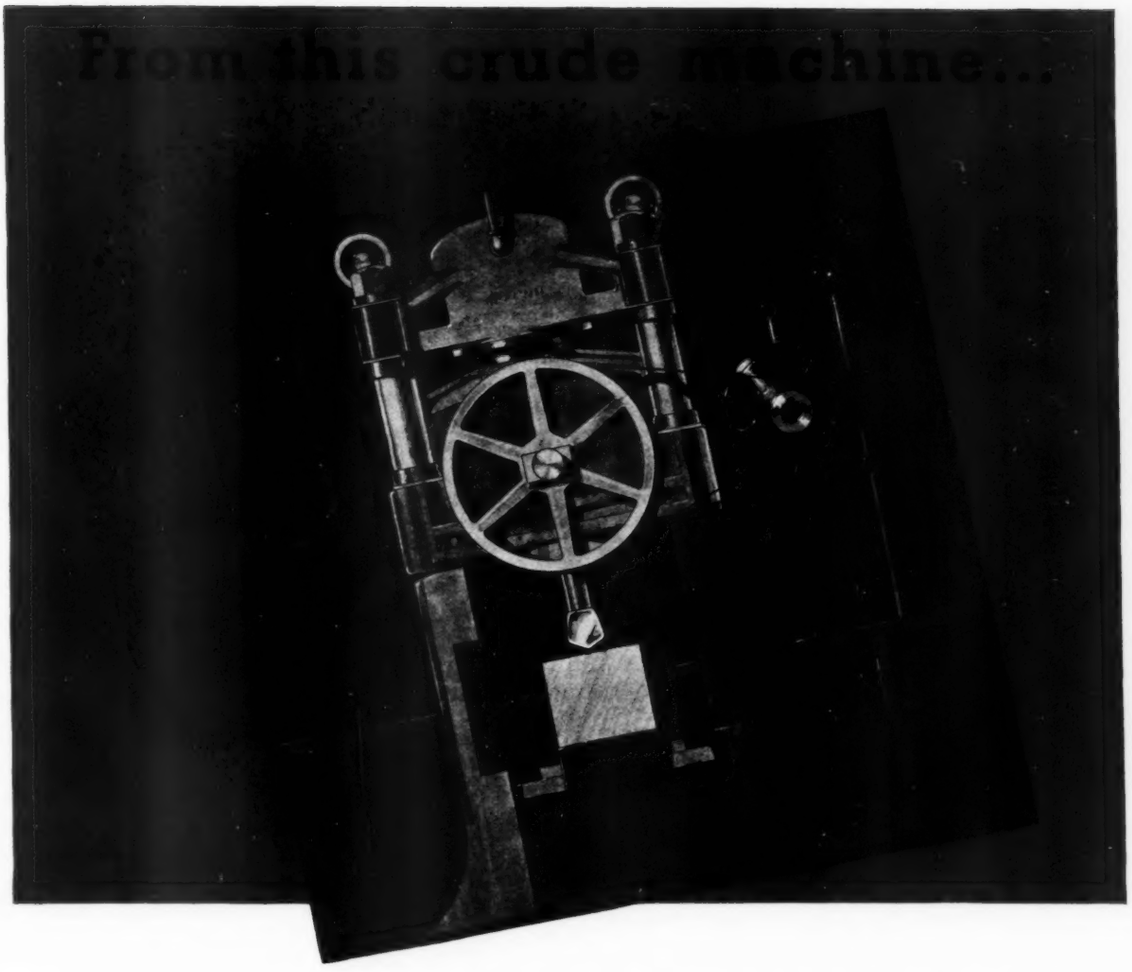
Fig. 1 —Map of parts of Oklahoma and Kansas showing the oil and gas fields in the Burbank and Bartlesville sands

Figures 1, 2, and 3 courtesy of the American Association of Petroleum Geologists Bulletin, Vol. 21, January, 1937.

RESULTS OF INVESTIGATION

The investigation of the Bartlesville and Burbank sands was begun in 1931 by the senior author for the State Geological Survey of Kansas in cooperation with the U. S. Geological Survey and was expanded into Oklahoma in 1934 by both authors working with several other geologists of the staff of the U. S. Geological Survey. The results of the investigation demonstrated that the sands were formed as beach deposits on the western shore of the Cherokee Sea. The known shoestring sand trends have many features in common with the belts of sand bars, called barrier beaches or offshore bars, on the Atlantic and Gulf coasts (Figure 3). The sand bodies of the shoestring trends and those of the modern offshore bar systems are arranged approximately end to end in belts that have remarkably straight courses; each deviates from straight courses only by broad sweeping curves. The offshore bars of the Atlantic and Gulf coasts are separated by gaps known as tidal inlets; likewise, the continuity of each of the shoestring trends of oil sands is broken by gaps barren of thick beds of sand at the horizon of the shoestring sand bodies. The offset arrangement of the oil-bearing sand bodies is not particularly prominent in Figure 1 because the scale of the map is too small to show it clearly. However, a map pub-

*Published by permission of the director of the U. S. Geological Survey.



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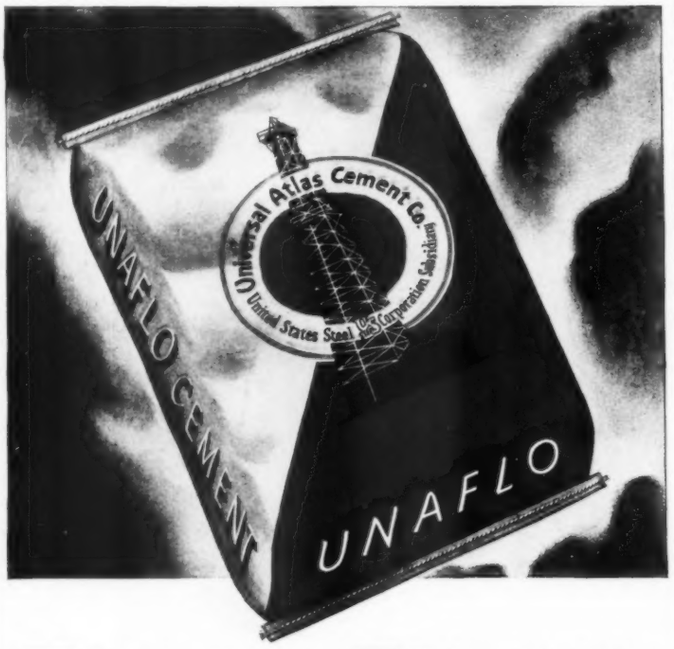

1 Gives you more time to get it down. Unaflo remains easily pumpable under extreme well conditions, such as high temperatures and enforced delays.

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lished recently by the U. S. Geological Survey[1] (scale one-half inch to the mile) and a similar map to be issued in the near future by the Kansas Geological Survey[2] clearly shows the offset arrangement of the sand bodies.

It is important to bear in mind the characteristic features of the shoestring trends when select-

Fig. 3—Photograph of coast charts (U. S. Coast and Geodetic Survey) of part of the Atlantic Coast of Virginia. The narrow black areas along the shore represent the offshore bars; the irregularly shaped gray areas and also the white areas to the left of the bars are tidal inlets which afford water connections between the lagoons and the ocean

ing sites for prospecting. After projecting an established trend or belt of sand lenses into the area to be prospected, plans should be made to drill several wells. One well is rarely sufficient to test a prospectively valuable area. Because the sand lenses are narrow, drilling sites should be selected in an alignment approximately at right angles to the projected trend of the sand belt.

On the basis of the performance of many oil fields in Kansas and Oklahoma, whose oil is produced from the Burbank shoestring sands, an average per acre yield of from 6,000 to 8,000 bbls. of oil having a gravity of 38° to 40° Baume can be expected. The Burbank field in Osage and Kay Counties, Oklahoma, up to January 1, 1936, had yielded 188,000,000 bbls. of oil, which is an average yield of about 8,160 bbls. per acre. A few leases (160 acres each) in the field have produced more than 20,000 bbls. of oil per acre. The high initial yield of the wells, many of which produced 3,000 to 5,000 bbls. of oil a day, and the large thickness of pay sand in the South Burbank field indicate that the yield of oil per acre there will exceed that of the Burbank field. Moreover, the South Burbank oil field is being operated as a unit and a high reservoir pressure is being maintained by returning gas to the sand. This method of operation is believed to be much more efficient than that used in operating the main Burbank field, and it constitutes an additional reason for the prediction that the ultimate per acre yield in the South Burbank field will exceed that of the Burbank field. Several shoestring fields in Kansas probably will have an ultimate per acre yield of 7,000 to 8,000 bbls. of oil, but others will be considerably less. Hutchinson[3] has estimated that the average ultimate yield in all Burbank shoestring sand pools in Greenwood and Butler counties, Kansas, will be approximately 6,000 barrels per acre.

A description of the Bartlesville and Burbank sands a discussion of their mode of origin is set forth in some detail in a paper to be published in the January, 1937, bulletin of the American Association of Petroleum Geologists.[4]

[1]Bass, N. W., Kennedy, L. E., Dillard, W. R., and Leatherock, Constance, Subsurface geology of Osage County, Oklahoma: U. S. Geol. Survey Press Report 105,-368, Jan. 1936.

[2]Bass, N. W., Origin of the shoestring sands of Butler and Greenwood Counties, Kansas: Kansas Geol. Survey Bull. 23, Pl. 1, in press.

[3]Hutchinson, N. M., Program of gas and air repressuring in eastern Kansas proves profitable, The Oil and Gas Journal, p. 33, Feb. 27, 1936.

[4]Bass, N. W.; Leatherock, Constance; Dillard, W. R.; and Kennedy, L. E.: Origin and distribution of the Bartlesville and Burbank shoestring oil sands in parts of Oklahoma and Kansas. Am. Assoc. Petroleum Geologists Bull., Vol. 21, No. 1, Jan. 1937.

Variety of Pumping Equipment Used in Central Michigan

By T. P. SANDERS

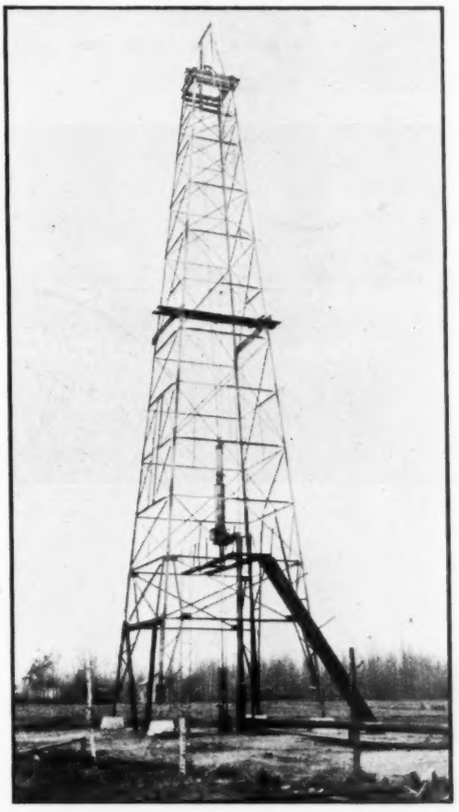
In the oil fields of central Michigan, where all wells are of nearly the same depth, and are operated under practically the same conditions, a wide variety of equipment is used. It is possible to find practically any surface equipment being used in the Mid-Continent also in use in the Michigan fields. In depth and many other characteristics the Michigan wells are comparable with the Trenton limestone wells of central Kansas.

The topography is essentially flat in the Michigan oil-producing territory and it is practically all cultivated land. Because the pay is usually at a depth greater than 3,000 feet, most of the wells are individually pumped, the power usually being furnished by single-cylinder gas engines. Multicylinder gas engines, electric motors and pneumatic pumping cylinders are quite common. Standard wooden rig-fronts are seen more often than the newer individual steel pumping units. Some of the units are the long-stroke, straight-lift type. Most wells are equipped with standard 84-foot steel derricks, but A-frames or masts are often used to reduce the investment. Subsurface equipment used is generally corrosion resisting.

The cost of drilling Michigan wells is usually about $18,000, which is less than the cost of wells of the same depth in the Mid-Continent. This is due to more soft shale in the section drilled. The Michigan producing wells pay back the cost of drilling more rapidly than do the Mid-Continent wells because there is no proration. The only unusual drilling problem encountered in Michigan wells is caused by the glacial drift, which is sometimes found to be 800 feet thick. In drilling through this section with a standard cable-tool rig, drive pipe is used to prevent caving over the bit. Except where quicksand is encountered, the drilling is carried on several feet ahead of the drive pipe, which is driven down a few feet from time to time. The drive pipe is driven through quicksand zones and the sand is removed from inside of the pipe. For driving the pipe, safety casing drive rings have largely replaced the two-piece clamps formerly used. The drive ring has slips which engage the drill stem in the upward direction. To prevent slipping down when the stem is raised for a blow, the ring is tightened over the slips by means of bolts. This ring prevents deformation of the pipe commonly caused by clamps.

Combination rigs are often being used with the change from rotary to standard being made after setting casing through the glacial drift. Sometimes the change in method is made deeper in the section. No wells have so far been drilled all of the way to the Dundee with a rotary rig, but a contractor drilling a test in section 20-12n-7w of Montcalm County intends to complete a rotary hole in the Dundee. Most of the rotary rigs in use in Michigan were used in the Mid-Continent, but some are new. Both 4-inch and 6-inch drill pipe are used, but 4-inch is the more common.

Thus oil production methods in Michigan are very similar to Mid-Continent methods. Because of the unfavorable nature of the pay zones, secondary recovery methods are not being used, except for one test for repressuring possibilities in the Porter field where a portable compressor is injecting gas into the Dundee pay. To date there have been no important results from this test.



Long stroke, pneumatic pumping head suspended in the derrick on a well in the Porter field, where many of these installations have been made and are now in use

W.P.R.A. Sets Meeting Date

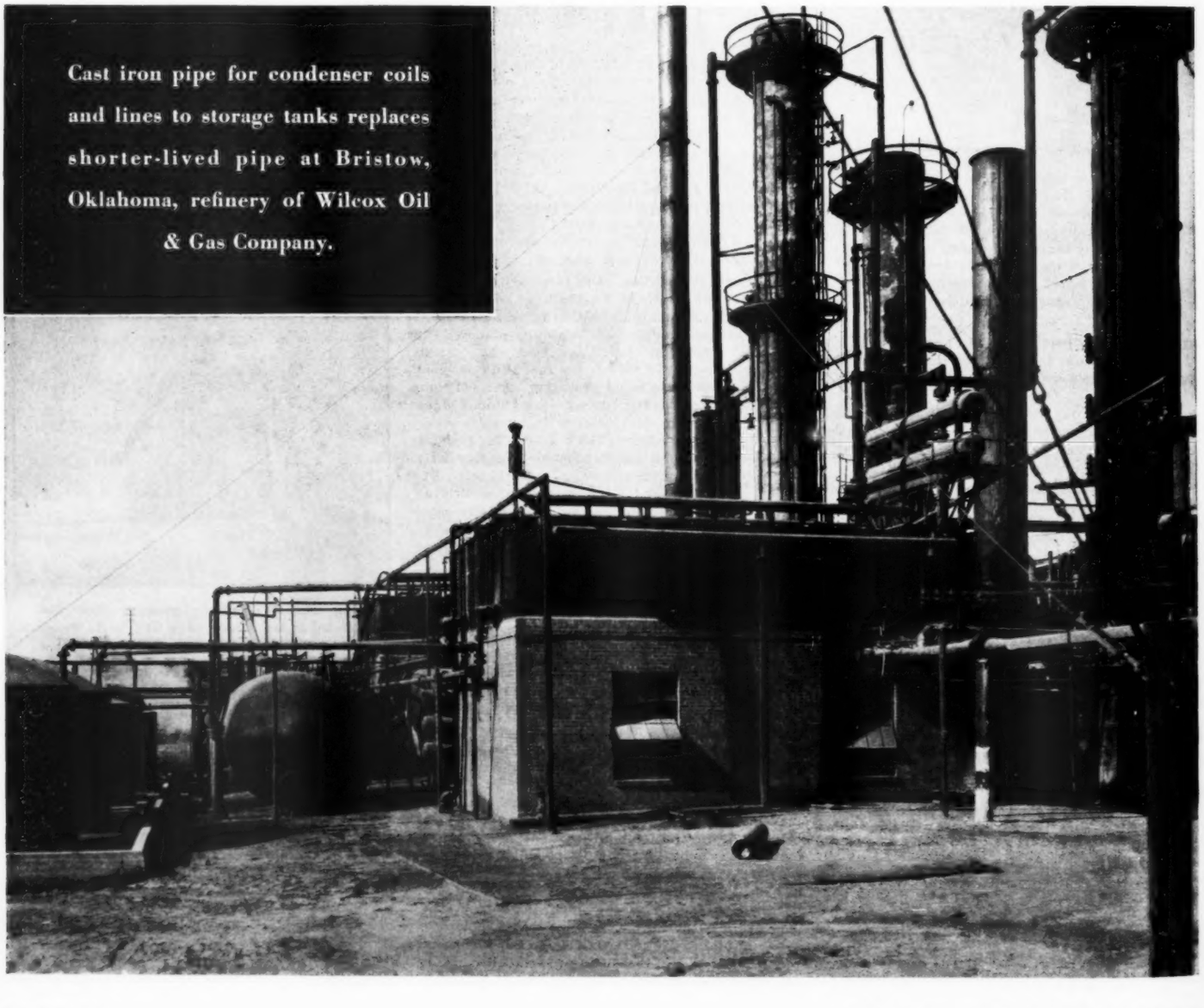
Directors of the Western Petroleum Refiners Association have set the dates and place for the twenty-fifth annual meeting of the association as March 29, 30 and 31, at the Baker Hotel, Mineral Wells, Tex. The first day of the meeting will be devoted to committee meetings, the second to manufacturing and technical sessions and the third day to the general meeting of the association. The board of directors also discussed the proposal of the Ethyl corporation to change the method of determining the octane rating of gasoline but took no action.

Another refinery uses cast iron pipe TO CUT DOWN REPLACEMENTS

In the refinery of Wilcox Oil & Gas Company at Bristow, Oklahoma, cast iron pipe is being used in condenser coils and for lines from condenser coils to storage tanks. Other pipe previously used in the same service had to be replaced at short intervals. The cast iron pipe lasts indefinitely.

There is a marked trend to cast iron pipe for refinery lines. Cast iron pipe has native high resistance to both exterior and interior corrosion. Full period of service considered, it costs less. In the end it has salvage value.

Cast iron pressure pipe is available in bell-and-spigot, plain and threaded ends, and flanged types, or with bottle-tight mechanical joints, in diameters from 1¼ to 84 inches. For further information write to The Cast Iron Pipe Research Association, Thos. F. Wolfe, Research Engineer, 1013 Peoples Gas Building, Chicago, Illinois.



Cast iron pipe for condenser coils and lines to storage tanks replaces shorter-lived pipe at Bristow, Oklahoma, refinery of Wilcox Oil & Gas Company.

TECHNICAL ABSTRACTS

Investigation of Angle Columns As Used for Derrick Legs

By S. B. SETTLE
Parkersburg Rig & Reel Co.

Presented before Chicago Meeting of American Petroleum Institute

In his paper Mr. Settle reviews the present practice for determining the capacities of A.P.I. derricks; records the results of tests conducted in the laboratory on full size leg sections; shows that there is a discrepancy in the existing A.P.I. column formulas; and points to the need of further investigation for the purpose of evolving a more correct method of rating derricks so that the derricks' safe load capacities will be commensurate with the strength of the leg sections. The tests were made with the purpose of determining: (1) Data on structural silicon-steel angle columns to be used as a basis for study of the present tentative A.P.I. column formula; (2) to what extent the reduction of cross-sectional area of angle columns, by punching holes, affects the strength of the column and the type of failure.

One point of interest noted in the tests was that the most noticeable amount of flaking took place in the vicinity of the bolt holes, where the special whitewash coating flaked off in lines which radiated from the holes at an angle of about 90 degrees and, running from the holes to the toe of the angle, created the form of a truss—with the toe of the angle representing the bottom chord, and the center line of the bolts the top chord. It is believed that these stress lines in the vicinity of the bolts show definitely that the column strength, especially of the heavier angles, is materially affected by the reduction of the gross cross-sectional area in the fabrication of derrick legs. Results of the tests seemed to indicate that the reduction in gross section by punching holes was a contributing cause of the failure of the angle near the end under a first test.

A recapitulation of the tests shows that 10 columns failed by crippling of the legs near the top, 11 by crippling of the legs near the bottom, 4 by buckling of the legs at the center of the column, 3 by combination of flexure at the middle followed by crippling of the legs at the top, 1 by crippling of the legs near the top accompanied by a twisting of the top half of the column about the column center, and 1 by a combination of crippling at both ends and a definite flexure at the middle. The tests also show conclusively that the amount of compression in the angle column is directly proportional to the amount of load imposed; the limiting unit stress varying with each particular material.

Two Unusual Installations of Cathodic Protection of Pipe Lines

By GEORGE I. RHODES
Ford, Bacon & Davis, Inc.

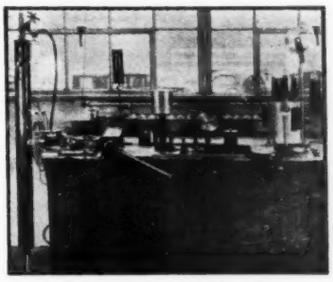
Presented before Chicago Meeting of American Petroleum Institute

—Kalden-Keystone
GEORGE I. RHODES

Whenever the cathodic protection of pipe lines requires a large amount of electric current, or the cost of electric current is high, it becomes necessary to minimize the amount of power required to keep the pipe lines suitably negative to the soil in which they are buried. In his paper Mr. Rhodes discusses two installations where the waste of electric power has been reduced to a minimum, one line utilizing purchased power and the other utilizing energy generated by the galvanic action between zinc and the pipe line itself. Both installations differ from the ordinary method of cathodic protection in that the anodes or ground beds are fairly uniformly distributed along the pipe line instead of being concentrated at points in the general vicinity of the rectifiers or electric generators furnishing the current required for protection. A description of both installations is given and costs of operating and installing compared. The author states that the costs of cathodic protection are so much less than the cost of reconditioning that pipe line companies should investigate the feasibility of its application to its lines. One or more sections of line in imminent need of reconditioning should be protected and watched for a period long enough to permit the determination of policy for future work.

In his conclusion Mr. Rhodes states: "Zinc in cathodic protection is new. Its application has been worked out in practice, but whether or not continued protection will be secured from the installations as made can be determined only by time. Thus far there has been no diminution in the galvanic activity of any of the zinc rods, but the protective currents and voltages are so much lower than are obtainable with power that some reinforcement may be found necessary later. However, the zinc installations can stand a much higher cost and still be cheaper than reconditioning. Zinc has one outstanding advantage in that it can be installed for as short a section as may be desired."

New Apparatus for Securing and Examining Sub-Surface Samples of Oil



By PAUL G. EXLINE
Gulf Research & Development Co.

Presented before Chicago Meeting of American Petroleum Institute

The importance of obtaining fundamental data on the physical properties of reservoir fluids has been recognized for some time. The increasing attention being given to the scientific study of the relation these properties bear to correct production practices shows the need for equipment designed to secure representative samples of reservoir fluids and to examine them in detail under suitably controlled conditions. In his paper the author describes the present status of the equipment designed for this purpose; the paper being in the nature of a progress report. He describes a subsurface sampler and the apparatus used in analyzing the samples of reservoir fluid obtained with it. The equipment used consists of the sampler used both for obtaining the sample and as the container during its examination, a deadweight tester for measuring pressures, a heater jacket for maintaining the samples at a constant temperature during the tests, a gas meter for measuring gas volumes, a mercury pump for changing the effective volume of the sample chamber by introducing mercury under pressure, together with several devices for attaching these to the sampler.

The apparatus as assembled for analyzing the samples is shown in the accompanying photograph. Special efforts were made by the author to construct apparatus which could be used in the field in order to eliminate time lost in sending the samples to the laboratory. Mr. Exline states that although this has been done without sacrificing reliability of the results, and with a great reduction in the time between sampling and reporting the data, there has been some loss in flexibility. Following the description of the various parts of the apparatus and their operation, he describes the method of examination of samples and gives a discussion of sources of error.

Welding Design

By C. H. JENNINGS
Westinghouse Research Laboratories

Before Cleveland Meeting of American Society of Mechanical Engineers

Although welding has been extensively used in the fabrication of engineering structures for a number of years, there is still a decided lack of knowledge among engineers concerning the fundamental factors governing a satisfactory design. In addition there is a lack of agreement among designers as to the methods of calculating weld stresses and the correct working stresses to employ for different types of joints. This article contains a discussion of a number of variables such as the selection of the proper joint, the calculation of weld stresses, the determination of working stresses and safety factors, and the important features governing a good welded design. An analysis is made between butt and fillet welds in an effort to assist the designer in the selection of the proper type. Theoretical and practical aspects such as stress concentrations resulting from discontinuities in form, fabrication difficulties, welding costs, and distortion problems are considered. The calculation of weld stresses in different types of joints is discussed and suitable formulas recommended on the basis of their agreement with test results, and their general applicability and acceptance in present design practice.

Working stresses and safety factors for butt and fillet welds are determined on the basis of static and dynamic tests. A table of recommended working stresses for bare and coated electrode welds subject to all types of loading is given to assist the designer. This table is based upon joints made on ordinary low carbon structural grade steel. A number of important design features that are essential in the design of economical welded structures are given. These features include the recommended minimum size of fillet welds for given plate thicknesses, the application of intermittent welds in design, and the influence of joint design on the fabrication of butt joints.

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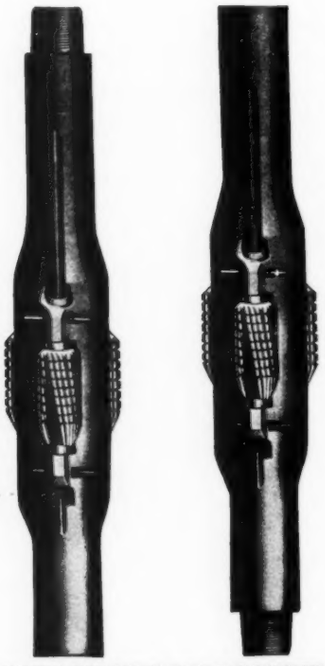

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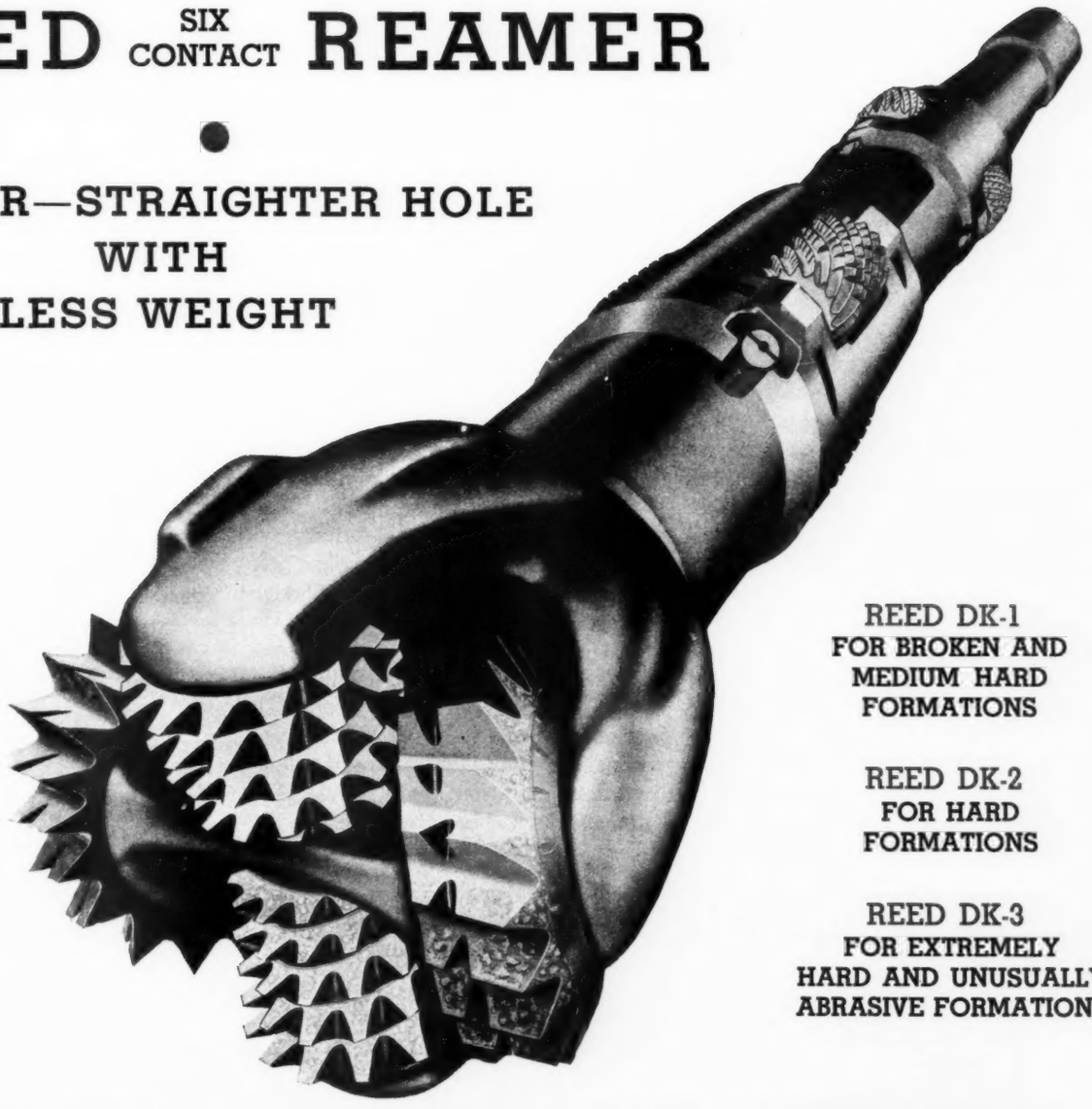

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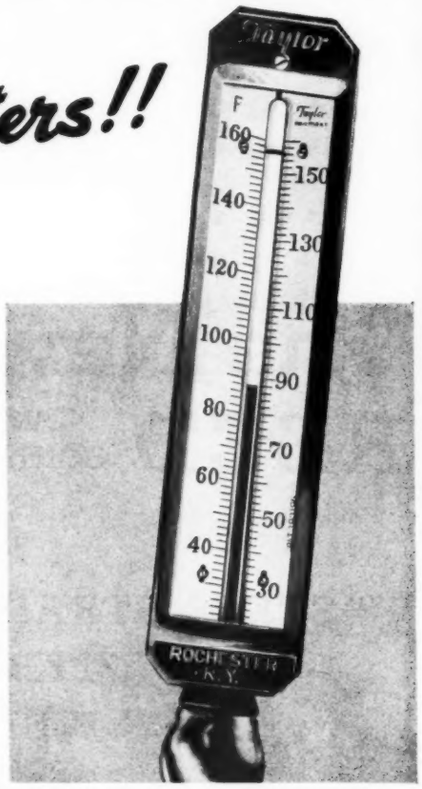

New Taylor "BINOC" Tubing corrects fault in previous instruments. Food executives find this optically correct tubing makes the easiest-to-read thermometers they ever tested.

As a mirage has often tricked the senses of tired and thirsty desert travelers, bore reflection in industrial thermometers of the past has deceived the honest eyes of trained employees. It has defeated quick, easy, accurate temperature readings. For in the attempt to make a reading from an improper angle, reflection in the empty bore above the mercury column has made the mercury appear higher than it actually was.

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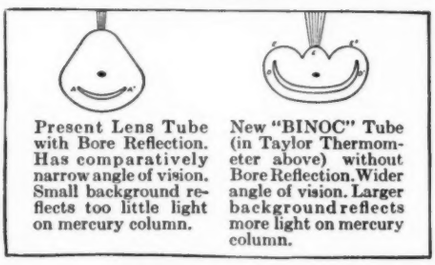
That's a simple explanation. But an even simpler way is to examine "BINOC" Tubing in a Taylor Thermometer. You will discover what many other food executives have found to their amazement—that the one quality industrial thermometers have always lacked before is now supplied by "BINOC" Tubing—EASY READING.

"BINOC" Tubing more than doubles the angle of vision within which you can see and read the broad, sharply defined mercury columns. Yet it loses nothing in magnification.

"BINOC" Tubing gives Binocular Vision. It ends the need for close-range reading with one eye squinting. It assures accurate reading with great ease at longer distances—*with Both Eyes Open*. Its triple lens construction concentrates more light, more intensely, on mercury column and background, and makes the column stand out in bold relief.

With a simple testing device a Taylor Representative will prove these points in a demonstration right in your own office. See how "BINOC" Tubing in Taylor Industrial Thermometers can promote the accuracy and efficiency of readings in your plant. For an immediate demonstration, write Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada.



Present Lens Tube with Bore Reflection. Has comparatively narrow angle of vision. Small background reflects too little light on mercury column.

New "BINOC" Tube (in Taylor Thermometer above) without Bore Reflection. Wider angle of vision. Larger background reflects more light on mercury column.

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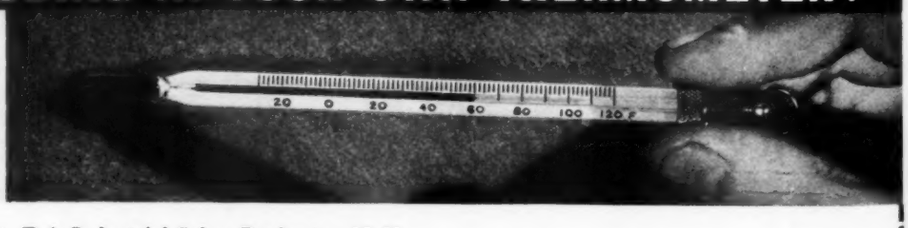

Taylor Instrument Companies, Dept. D-4. Industrial Sales, Rochester, N. Y.

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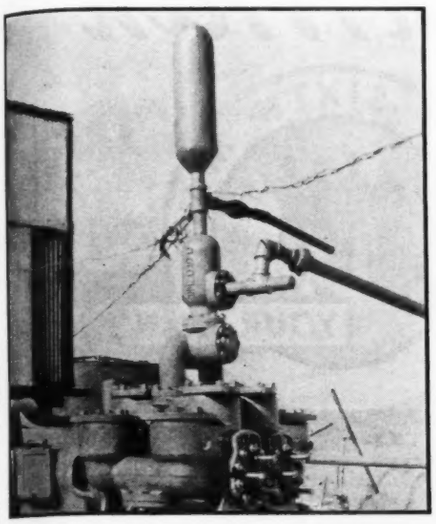
OPERATING IDEAS

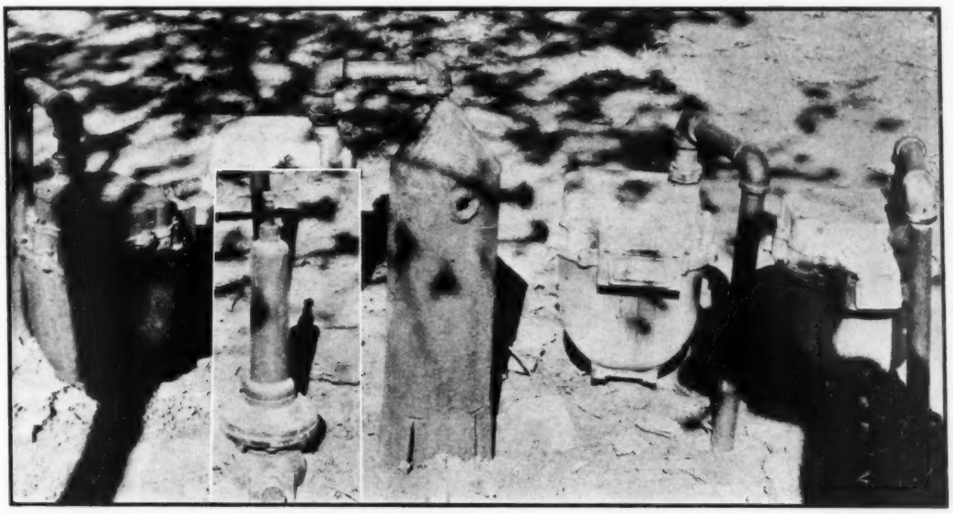


Air Cushion on Mud Pump

To cushion the stroke and prevent damage to the rotary mud-pump caused by pounding when the suction line is accidentally raised above the level of the fluid in the suction pit, a contractor drilling a well near Wink, Tex., has installed an additional air chamber on the discharge of the pump. Besides preventing the damage sometimes caused by air being drawn into the cylinders, the air chamber causes a more uniform pressure to be held on the pump's discharge. The air chamber is constructed from used pipe, one end being welded closed and the other welded to the nipple screwing the line leading to the relief valve.

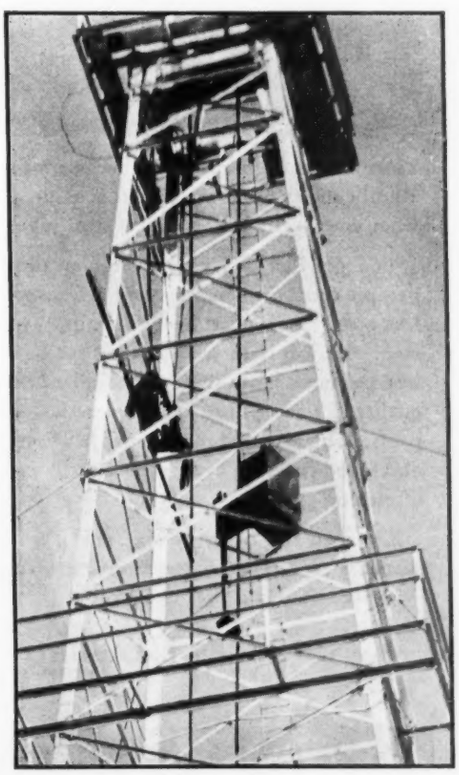
High-Pressure Regulator Housed in School Yard

A gas company supplying gas to an Oklahoma City school experienced some difficulty in regulating the flow of gas from its main line into the school lateral; due to children tampering with the high-pressure regulator. To prevent this the company closed a 10-inch pipe on one end by welding to form a cover for the regulator. The cover is fastened in place by a bar running through a slot cut in the pipe; a padlock being used to prevent the bar from being removed. The photograph shows the cover in place; and insert, with the cover removed.



Basket for Rod-Tubing Man

One large drilling company in the Mid-Continent has adopted the practice of installing a metal basket in its drilling wells where the derrick man stands while running rods and tubing. The basket is 18 by 36 inches and 42 inches high, floored with steel grating. It is equipped with a 7-foot perpendicular adjustment and operates through a double swivel in the supporting leg, allowing the basket to operate at any point within the four legs of the derrick. This device has been found to be much safer than the old type plank platform used and allows the derrick man to work more freely with less danger of slipping. When not in use the basket may be swung to one side.



Transfer Pump Installed on Passenger Car

For use on some leases where the amount of fluid to be moved does not warrant the installation of a permanent transfer pump, one oil company in the Oklahoma City field revamped the car shown in the accompanying picture so that it may be moved from lease to lease to pump out the flow tanks. A centrifugal pump is driven from the drive shaft by V-type belts, the pump operating at 1,500 r.p.m. and handling 200 bbls. of oil per hour. Therefore when it is necessary to empty a lease tank the unit moves under its own power to the well location, the pump connected to the tank and pipe line, and the oil pumped from the tank.

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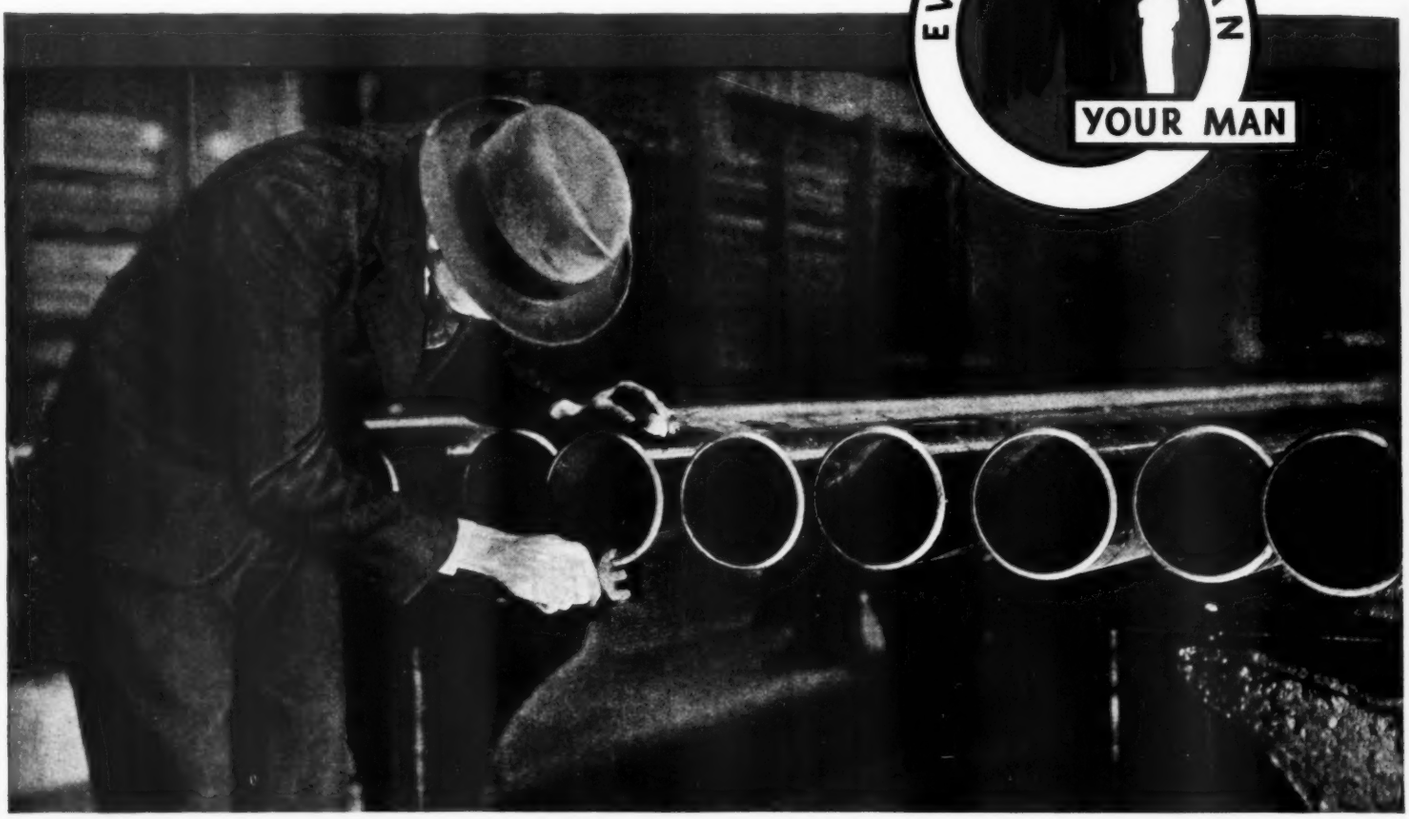

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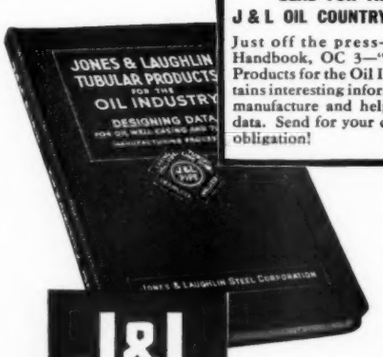

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Alloy Steels Aid Refiners to Reduce Corrosion

By W. L. NELSON
Metallurgical Editor

Many topics of interest to the petroleum industry were presented at the Symposium on High Strength Construction Metals held at the Pittsburgh regional meeting of the American Society for Testing Materials in March of this year. Two papers of major interest to the petroleum industry are "Carbon and Low Alloy Steels," by Edwin F. Cone, and "Corrosion Resisting Steels," by Ernest E. Thum. The material given herewith was abstracted in part from the aforementioned papers. Those two papers are exceptionally complete and are worthy of careful inspection.

Three elements are particularly effective in reducing the scale-forming tendency of steel or iron—namely, chromium, silicon and aluminum, but the silicon and aluminum irons cannot be easily fabricated. Truly, stainless steels are not attained until the chromium content is raised to about 13 per cent, but in the petroleum industry steels ranging from 2½ to 24 per cent chromium are being used to meet specific corrosion conditions. In fact, the steels that are used are selected mainly on an economic basis, or—the steel giving the longest service per dollar spent is selected regardless of whether corrosion occurs or not. Table 1, taken from E. S. Dixon,[1] shows the relative rate of corrosion of chromium steels when handling corrosive crude oils at elevated temperatures and pressures.

Table 1 and Figure 1, by F. N. Speller, are reliable indications of the life of chromium steels as compared with carbon steel when used in refinery service. The data given in Figure 1 are based on both laboratory and service tests and include work on 15 chrome-irons studied in 10 different refineries. The 5-6 per cent chromium steel is best known and the success of this alloy as a tube material for oil stills has been influential in causing it to be adopted more recently as a material for air preheaters and high-pressure stem superheaters in large power plants. When welding 5 chrome steel the joint must be preheated to 600° F., kept above 300° F. at all times during the welding, and heated to 1,600° F., followed by slow cooling, in order to avoid brittleness of the weld. Another difficulty in the use of the simple chrome-carbon steels is the brittleness that may develop during use of the metal at a high operating temperature. Although these steels remain strong and ductile while at heat, they may show zero ductility when cooled for cleaning during winter weather. The use of nickel, molybdenum and tungsten aid in preventing the loss of ductility and constitutes one of the important reasons for the use of these metals in conjunction with chromium—as in 18-8 chrome nickel, etc.

Molybdenum is also excellent for increasing the creep strength of the alloys, although the resistance to scaling is decreased by the addition of molybdenum. The more expensive element, tungsten, also increases the creep strength, but it increases the scaling resistance by only 20 per cent. In general the temperature can be increased by about 100° F. for each 0.5 per cent of molybdenum that is added and still maintain the same creep strength. Thus if a temperature of 800° F. is permissible for a 5 chrome steel, the addition of 0.5 per cent of molybdenum will permit the temperature to be raised to 900° F. In general, the addition of nickel, chromium and tungsten aids in avoiding the brittleness caused by long heating at elevated temperatures—probably by reducing the rate of grain growth or by locking the carbide particles so that they cannot migrate so readily to the grain boundaries, or partly both.

[1]Wilten and Dixon, "Aging Embrittlement of 4 to 6 Per Cent Chromium Steel," proceedings A.S.T.M., Vol. 34, Part II, p. 59 (1934).

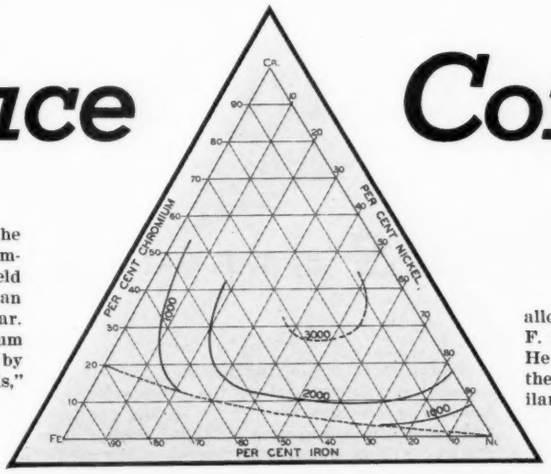

Fig. 2—Creep strength, in pounds per square inch, of chromium-nickel-iron alloys in the cast condition at 1,600° F.—(After Tucker and Sinclair)

TABLE 1—RELATIVE CORROSION OF CHROMIUM STEELS WHEN HANDLING CERTAIN CORROSIVE CRUDES AT HIGH TEMPERATURE AND PRESSURE (AFTER E. S. DIXON)

Per cent chromium—	Penetration, inches per year	Percentage penetration, carbon steel = 100
Plain carbon	0.0066	100
1	0.0034	51
2	0.0026	39
4	0.0020	30
6	0.0016	24
8	0.0012	18
10	0.0008	12

Professor Norton of Massachusetts Institute of Technology has also conducted creep tests of 18-8 alloy tubes after 31,100 hours service at 925-975° F. wall temperature and 500-700 pounds pressure. He finds that strength of the material is almost the same and not inferior to the strength of similar steels that have never been in service. Quoting from Ernest E. Thum: "Experience since 1928 with tubing in super-power plants and petroleum refineries . . . warrants the statement that this material is the best so far developed to meet severe conditions up to 1,300° F. Installations in petroleum cracking units handling corrosive western crudes have operated over 25,000 stream hours without appreciable corrosion or erosion in the hottest locations; and in situations requiring replacement of carbon steel tubes every 60 days. In fact, the material long outlives the useful life of the rest of the equipment and has caused the oil man to turn to less expensive, lower chromium steels." (Notably 5 chromium.)

The use of 18-8 alloy tubes in heat exchangers and condensers have not been notably successful even with mild corrosive conditions and at temperatures below 400° F. Metallurgists contend that the failures are due to the large coefficient of expansion of the 18-8 alloy and to substantiate their contention they cite successful service if the tubes and shell are constructed of the same material or materials of equal coefficient of expansion.

The summarizing data given by Thum in "Corrosion Resisting Steels," A.S.T.M. Symposium on High Strength Construction Metals, are particularly complete and unfortunately cannot be given in detail. However, Figure 2 reproduced after Tucker and Sinclair is presented as a valuable summary of the creep strength of nickel-chrome-iron alloys in the cast condition at 1,600° F. These alloys are widely used in the petroleum industry as tube hangers and supports in tube stills and furnaces.

Among the low-alloy high-strength steels described by Edwin F. Cone, only a few direct references to petroleum service are made. For the low temperatures encountered in dewaxing, the low nickel steels are recommended. The composition of such a steel is 2.35 Ni, 0.24 C, 0.65 Mn and 0.22 Si. Cromansil steel is also widely used for petroleum services. More of this steel has been supplied to the oil industry than to any other industry. It is used for high-strength oil-well casing and for oil tankers because of its slightly better resistance to corrosion, particularly the action of sea water. Cromansil contains 1-1.4 per cent manganese, 0.4-0.6 per cent chromium, 0.6-0.9 per cent silicon and the entire range of low and medium carbon (0.1-0.5).

The two papers discussed here may be obtained in complete form, together with three other extensive and authoritative papers presented at the symposium, in a bound colume from the American Society for Testing Materials, 260 South Broad Street, Philadelphia, Pa., at a list price of $1.25.

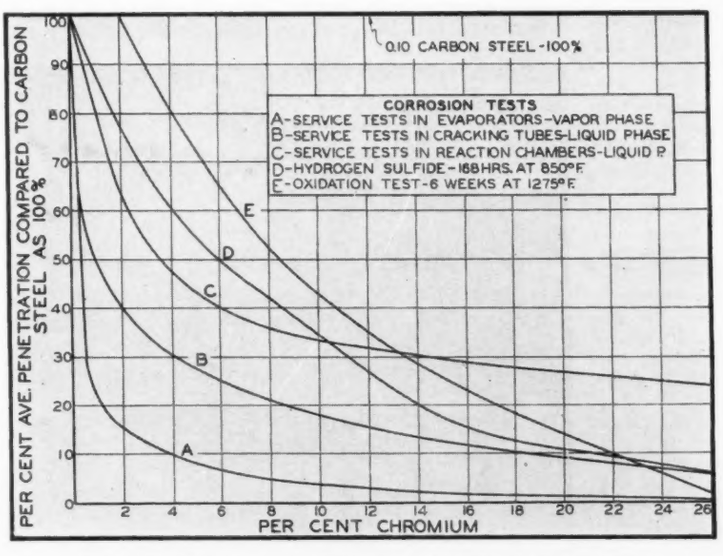

Fig. 1—Relative corrosion resistance of chromium steels in refinery service compared with carbon steel.—(Taken from Speller)

Livermore Townsite Wells Pumped With Small Powers

By T. P. SANDERS

Oil and water being blown out of a Livermore well by a nitroglycerin shot in the pay sand

The Livermore field of western Kentucky must be classed at present as a large consumer of oil-field supplies. This is due to several considerations. First, in drilling wells in this field several strings of casing are required, although the completed depth is almost always less than 1,400 feet deep. Second, the natural flow period for the later wells drilled has been very short, so that the completion of a well soon requires an investment in pumping equipment. No artificial flow is used. Third, many wells are being drilled and completed at the present time, and of the 121 wells completed in the field before September 1, many are now being equipped for pumping. Fourth, since there is very little second-hand equipment available in this area, practically all new equipment must be used when wells are equipped for pumping.

Installation for pumping two wells in the downtown district of Livermore, Ky.; using a small engine and short rod-line

A large part of the field lies within the town of Livermore, while the remainder lies in open country. This difference in surface conditions has caused two distinctly different types of pumping installations. In the populated areas of the city, small engines are used which pump from one to four wells with short rod lines. A few individual jacks are used, but with closely-spaced shallow wells it is considered more economical to pump several wells with one engine. The many roads and buildings prevent the economic use of large powers and long rod lines. The use of large central powers is further discouraged by the fact that the leases within the townsite are small. The pumping of wells in the northeastern section of the field where town-lot conditions are not encountered is characterized by central powers pumping a large number of wells and unusually long rod lines. Heavy rods and other surface equipment are used, and the installations appear to have been designed for long-time uninterrupted service. One portable repressuring unit has been installed in this section of the field, which uses one input well. Gas produced from the other wells on the lease is injected back into the producing formation. It is planned to drill more input wells for this purpose.

The Livermore pool is on the south flank of the Rough Creek anticline, which is a compressional fold with accompanying faulting and extends across the southern end of the eastern interior basin. The structure in which the oil and gas have accumulated is a fold with its axis plunging in a southwesterly direction. It is faulted on the northwest flank by a major fault which parallels the axis of the fold.

Producing formations in the Livermore field are the Barlow and the Bethel sands. The Barlow sand is stratigraphically higher than the Bethel, and the two are separated by the Bethel lime. Both sands occur in the Lower Chester group of the Mississippian system. The Barlow sand and the Bethel lime are in the Paint Creek formation, while the Bethel sand occurs as lenticular sandstone bodies in the Sample formation. In various parts of the area the Barlow sands lies at a depth of 1,050 feet to 1,350 feet and the Bethel sand generally about 50 feet deeper. The Barlow sand is either nonproductive or absent over practically all of the area in which the Bethel sand is productive, and vice versa. The Bethel sand is nonproductive or absent under the Barlow pool as far as is known at present. However, most wells drilled in the Barlow pool have not tested the Bethel sand, so that it is possible that deepening of these wells may discover some Bethel oil in the future. Sand bodies in this region are almost always lenticular and are characteristically variable. Faulting and stratigraphic traps play a much larger role in accumulation of oil and gas than does anticlinal structure. The Barlow and Bethel sands each act as an individual reservoir. In this area the possible producing formations below the Chester series of Mississippian rocks remain virtually untested. George R. Wesley, assistant state geologist at Owensboro, points out in his recent report, ("Geology of the Livermore Oil Pool," Series VIII, Bulletin II of Department of Mines and Minerals, Lexington, Ky.), that this area is a most logical location for a deep test, since the structural conditions are known to be favorable.

By September 1, 1936, the Livermore pool had produced 465,211 bbls. of oil. The average daily production per well for the life of the field was 28.54 bbls. The present known productive area of the pool is estimated at 700 acres, of which the Bethel pool, which lies northwest of the town of Livermore, makes up about 400 acres. The remaining 300 acres make up the Barlow pool, lying within and to the north of Livermore.

The cost of drilling, shooting and equipping a producer in the Livermore field ranges from $5,000 to $6,000. Casing programs differ, but three

Long rod-lines operating wells in the part of the pool where the Bethel sand is productive

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strings are usually required, and a short liner is sometimes used. All of the wells are shot, the size of the shot depending on the thickness of the pay, with the average probably between 90 and 100 quarts of liquid nitroglycerin. The initial production for the better wells in the field ranges between 200 and 250 bbls. per day.

The total oil originally present in the Bethel sand pool is conservatively estimated at 18,000 bbls. per acre, or a total for the known productive area of 7,200,000 bbls. The Barlow sand is estimated at 22,500 bbls. per acre, or a total of 6,750,000 bbls. for the pool. However, it is stated by George R. Wesley that under the present methods of production a fair estimate of the recoverable oil from the Bethel sand does not exceed 15 per cent, while the Barlow sand, due to its nature and closer drilling, will probably yield about 20 per cent. Thus, when the wells in the pool have reached the point of abandonment, about 2,430,000 bbls. of oil will have been produced and about 11,520,000 bbls. will remain in the reservoir in a condition which will make it impossible to recover economically. It is believed that under more efficient operating conditions, which are known to the industry at present, the recovery from this pool might be doubled.

The lease on which gas is returned to the reservoir offers a conspicuous example of conservation. It is probable that repressuring will become quite general in the later life of the field, when gas for input use is harder to obtain and the condition of the oil remaining in the reservoir will cause it to respond less readily to gas drive. Besides returning gas to the reservoir, present conservation of reservoir energy would call for a rate of production and production methods, such as flow through small tubing, which would reduce the gas-oil ratio. While this pool offers an interesting example, because study has been given to the reserves and the expected recovery, it does not represent unusual practice.

"New 1937 Cars"

According to Dr. D. P. Barnard of the Standard Oil Co. (Indiana), the introduction of the 1937 automobile models heralds the coming of two inconspicuous but important developments—the gasoline volatility selector and the "hypoid" axle. While installed on many of the new models, the volatility selector is not standard equipment, as yet, on all.

During the past few years the petroleum industry has made steady advances in the art of adjusting fuel volatility to seasonal changes in requirements. For hot-weather service highly stable fuels are now provided, while for winter use products permitting easy starting and minimum use of the choke have been the goal.

In the past, these advantages were not fully gained because of improper use of the choke by hand or because automatic chokes had a tendency to treat all fuels alike. The result was that the mileage improvements possible with the newer winter gasolines were not attained in full measure. With the volatility selector, however, it is now possible to adjust the carburetor system for the quality of fuel employed and thereby attain improvements in performance and economy.

Naturally, it is true that with any volatility selector setting the carburetor system is more sensitive to changes in fuel quality than it would be without such control. However, the advantages accompanying the use of high quality products in cars so equipped will be quickly appreciated, and no difficulty should be encountered if changes in quality of fuel are not made without the simple movement of the selector "finger," which will set the system for fuels of other quality. The volatility selector will make more apparent than ever the difficulty of obtaining the best mileage and performance with low quality fuels.

The use of hypoid and high-tooth pressure spiral bevel axles on many of the new models is another step toward utilizing to the fullest extent the advantages of recent petroleum-industry developments. The hypoid or high-tooth pressure axle requires careful attention to lubrication, therefore, use of any old oil or grease spells certain trouble. They must be lubricated with products known to be suitable.

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Above: International Trucks are used in all parts of the world to distribute petroleum products for the marketing division of the oil industry

Below: International Trucks and Tractors have played an important part in major pipe-line projects. They were on the job again this summer when the natural gas line extension to Detroit was laid. Here is one of the fleet of International Trucks used by C. Hobson Dunn of Dallas to string pipe

Above: An International TD-40 Diesel TracTracTo owned by Earl Collins Riverdale, Kans., diggin a slush pit near Wellington, Kans.

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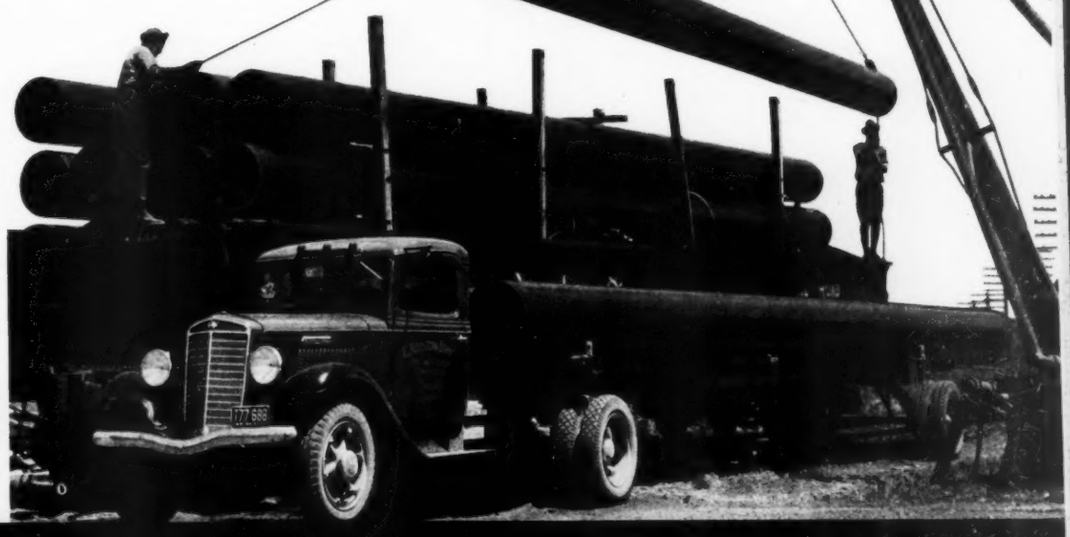
Below: This International Power Unit is one of seven which are powering the pumps for the Alma Oil Co., on the Watchdog lease near Arkansas City, Kans.



INTERNATIONAL HARVESTER

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Permissible Quantity of Hydrogen Sulfide in Natural Gas

What is the maximum amount per 100 cubic feet of gas of either hydrogen sulfide or mercaptans that could be burned in air open heater without too objectionable an odor, or without injurious effect upon persons breathing the fumes liberated?—A. M. C.

The quantity of hydrogen sulfide that may be present in artificial gas is controlled by law in many cities. The generally accepted maximum limit is 30 grains per 100 cubic feet or about 0.05 per cent by volume. This is somewhat above the danger limit, that may be breathed by human beings for short periods without harm. The concentration of 0.02 per cent is considered to be the maximum quantity of hydrogen sulfide that should be permitted in a gas which may possibly be breathed by persons, accidently exposed to it.

It appears that the same limits that have been imposed by city and state authorities for the hydrogen content of artificial gas will serve as a guide in respect to natural gas. A small quantity of hydrogen sulfide in a domestic gas is desirable, for the distinct odor serves to detect the escape of gas containing it. In New York state a commission prescribes that domestic gas shall show no positive test in the presence of lead acetate paper.

Mercaptans do not exist in natural gas in very large quantities because the only mercaptan boiling at low enough temperature to permit its presence in gas form is the lowest in the series, methyl mercaptan, which boils at about 46° F. The next one is the ethyl mercaptan, boiling at 390° F.; which is entirely too high to exist as a gas in any apreciable quantity.

The sulfur content of a gas used in appliances is seldom large enough to be objectionable because of the odor of the fumes liberated; but the products of combustion may be displeasing when they cause the silverware, picture frames, etc., to tarnish. Hydrogen sulfide and mercaptans burn to sulfur dioxide, which readily acts on the colors in wallpaper and textiles. It also cause silver, etc., to darken.

Solubility of Litharge in Caustic Solutions and Concentrations Used

We are using a sodium plumbite solution to sweeten gasoline and wish to know the amount of lead oxide which is soluble in various Baume gravities of sodium hydroxide. What is the lowest gravity which will retain enough lead to satisfactorily sweeten gasoline?—R. K. G.

Litharge is considered to be soluble in caustic soda solution to the extent of nearly 3 per cent. This is an approximate figure, because at constant temperature the solubility of litharge varies with the purity of the litharge and especially with the concentration of the sodium hydroxide, increasing slowly up to about 25° Baume, when it begins to fall off. Some refiners use a caustic solution of 18-30° Baume, others make the strength down to 10-12° Baume, and some treaters prefer a strength of 14-16° Baume, for making the doctor solution.

My personal experiments have shown that the best grade of litharge obtainable dissolves to the extent of 1.5 per cent by weight in 10° Baume, caustic soda solution at 60° F. The quantity dissolving gradually increases up to 2.8 per cent, when it becomes less in higher gravity caustic solutions. The 15° solution contains 2 per cent and the 20° solution 2.5 per cent litharge. This information is based on the constant shaking for 12 to 24 hours at 60° F. of mixtures of litharge and sodium hydroxide, then determining the lead in the clear solutions.

Treaters hold the plumbite solutions at various strengths, ranging from 10° to 25° Baume; probably the 15° solution is the average strength more extensively used.

References: C. K. Francis, The Oil and Gas Journal, September 22, 1927, page 201; same, April 5, 1928, page 163; Kalichevsky and Stagner, Chemical Refining of Petroleum, page 142.

Meaning of Diesel Index and Cetene Value of Diesel Fuels

What relation has Diesel Index to Cetene Value and what is meant by Octane Index in relation to diesel oil?—C. P. C.

Diesel index and cetene value are individual values. Diesel index number is calculated from the aniline point and the A.P.I. gravity of the oil. The steps are simply to multiply the gravity corrected to 60° F. by the aniline point "temperature degrees Fahrenheit" and divide by 100.

Aniline point is the lowest temperature to which equal volumes of pure aniline and the test sample are completely soluble.

Cetene number serves for fuel oil in a similar manner to octane number for motor fuels. It is the percentage of cetene in a blend of cetene and alphamethyl naphthalene which has the same ignition quantity, when determined in a specific engine under a definite set of conditions, as the sample being tested. For most fuels the cetene number is around 50. Diesel index number may range between 20 and 45 as minimums for good oil.

Octane number is not applied to fuel oils.

SPECIFICATIONS

GASOLINE SPECIFICATIONS FOR MEXICO

Mexico has one grade of commercial gasoline. The sulfur content shall not be over 0.15 per cent by weight, but in places where the temperature gets lower than 32° F. the sulfur content must be below 0.10 per cent by weight. Volatility or distillation range (for the altitude of Mexico City), minimum, 10 per cent at 154° F.; 50 per cent at 268° F.; 90 per cent at 374° F. Residue, 2 per cent, maximum.

Doctor test—negative.

Corrosion—no coloration on copper strip for 3 hours at 122° F.

Acidity—neutral.

Gum content—not more than 30 mg. per 100 cc. (copper dish).

Sulfur—not more than 0.15 per cent by weight.

Reid vapor pressure at 100° F.—not more than 8.5 lbs./sq. in.

Octane number—57 min.

Foreign substances—free from water and suspended material. Shall contain only the dyes, inhibitors, and antiknock compounds authorized by the Mexican government.

Reference: Gasoline Specifications for Mexico. Manuel Sanz and Octavio Rodriguez, Industria y Comercio de Mexico 1, 18, 1936.

Qualities That Serve for Evaluating Crude Oil for Refining

What are the specific characteristic inspections, physical and chemical, or the processes to which a crude oil is subjected by the refiner in order to evaluate it and permit its comparison with those quoted in The Oil and Gas Journal weekly? I am interested in obtaining analyses, such as you may suggest in answer to this inquiry, of Southwest Texas.—E. O. R.

There are many factors that influence the prices offered for the various crude oils of the United States. The first in importance is the quality of the oil and the second is the location of the well or pool, which involves transportation facilities and the market. A high quality oil with little or no means for moving it to a refinery might be purchased for much less than a low quality oil produced under favorable conditions for transportation.

One of the first tests applied to a new oil is the determination of A.P.I. gravity, which in a general way serves as an indication of the quantity of gasoline that is obtainable by direct distillation. The price tables published in The Oil and Gas Journal reflect the price offered by the major purchasers for fresh oil. The prices fluctuating according to A.P.I. gravity between a minimum of below 25 degrees and a maximum of 40 degrees and over for Oklahoma and Kansas. The competition is keen for Pennsylvania Grade oil, which is valued as a source of lubricating oil; also, the fields are well supplied with pipe lines and other outlets to nearby refineries, operating in the center of a dense population, with many industrial demands for high-grade lubricating oils. These conditions, together with purity of the lubricating oil fraction cause the exceptional prices offered for this oil. In most instances gasoline is the most valuable constituent of crude petroleum, so the high gravity oils command the best prices. Sometimes the composition of the oil, or the gasoline produced, is objectionable, such as an exceptionally high sulfur content, a peculiar form of sulfur or the yield of a very low octane number gasoline, etc. The expense required for refining such oils is reflected in the price tables. These qualities are first determined by a laboratory analysis.

The Southwest Texas oil fields are favorably located for outlets and are close to large refineries. In the area there are the districts of San Antonio, Laredo and Corpus Christi with about 130 different pools. The gravities vary from 22 to 49 degrees A.P.I. and the straightrun gasoline yield from zero to 80 per cent. These oils are characterized by an exceptional yield of fine cracking stock. The Saxet crude oil yields 65 per cent of high-grade furnace oil, gravity 27 degrees A.P.I. and pourpoint below zero, and 25 per cent of 16-gravity fuel oil having a pourpoint of 10° F.

Three analyses will serve to illustrate the character of these oils (figures, except gravity, are per cent):

Crude oil:	Samfordyce	Salt Flat	Sinton
Gravity A.P.I.	21.6	36.5	49.0
Sulfur	0.10	0.48	0.3
Gasoline	0.0	24 5	82.5
Kerosene	0.0	20.0	12.5
Gas oil	60.0	20.5	0.0
Heavy oil	35.0	19.0	0.0
Residue	5.0	16.0	4.5

Most of the Southwest Texas pools are small with none large enough in volume to have a marked influence on the prevailing price structure. The oils are of excellent quality, with a low sulfur content, yielding a high-grade furnace oil and a large quantity of cracking stock. A few pools produce oil which yields a high percentage of gasoline.

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PROBLEMS FROM READERS

Edited by L. G. E. Bignell

Two Practical Methods of Developing Caternary Curves

Can you suggest some simple way of laying out a caternary curve for a pull rod line for a central pumping plant?—J. B. E.

There are two simple methods of laying out a caternary for rod line, one may be used in the field and the other may be developed in the office.

For the field method drive two stakes at points where the rod line will be supported and level them to the proper elevations of the actual points of support. Then string between these two points of support a piano wire or a Halliburton measuring line and allow the line to assume a natural curve with the sag to suit the local topography. With the line in position stakes should be driven at intervals and marked to show the path of the measuring line, which will be very close to the actual path assumed by the heavier rod lines.

To lay out a rod line in the office a large drawing board is secured and a line drawn to represent the path of the proposed rod line. This line is subdivided using any desired scale and two uprights are erected at points on this line corresponding to the spacing of points of support of the rod line, the uprights also being to the same scale. The next step is to pass a string over the points of support and allow it to assume a natural curve. To give weight to the string a number of small split shot or beads should be strung on it at regular intervals. After the string has assumed the desired curve it is possible to measure the distance between the table top and path of the line using the scale and plot the path of the rod line.

These two practical methods have the advantages of being easily applied either in the field or office and have been found quite accurate enough for ordinary installations.

Method of Finding Pulley Speeds and Dimensions

I would like to know the formula for finding pulley dimensions necessary to give desired rated speed, e.g., from a 36-inch drive pulley on an engine at 325 r.p.m., what size pulley must I put on a generator to have the rated r.p.m. of 1,480?—C. E. M.

The following rules are suggested for calculating size and speed of driven and driver pulleys:

Problem I.—The diameter of the driver and driven being given, to find the number of revolutions of the driven:

Rule.—Multiply the diameter of the driver by its number of revolutions, and divide the product by the diameter of the driven; the quotient will be the number of revolutions.

Problem II.—The diameter and the revolutions of the driver being given to find the diameter of the driven, that shall make any given number of revolutions in the same time:

Rule.—Multiply the diameter of the driver by its number of revolutions, and divide the product by the number of revolutions of the driven; the quotient will be its diameter.

Problem III.—To ascertain the size of the driver:

Rule.—Multiply the diameter of the driven by the number of revolutions you wish to make, and divide the product by the revolutions of the driver; the quotient will be the size of the driver.

The above rules are practically correct. Though owing to slip, elasticity and thickness of the belt, the circumference of the driven seldom runs as fast as the driver.

Belts, like gears, have a pitch line, or a circumference of uniform motion. This circumference is within the thickness of the belt, and must be considered if pulleys differ greatly in diameter, and a required speed is absolutely necessary.

To solve your particular problem, designate diameter of the drive pulley on engine as "D,"; speed of driver pulley as "R"; diameter of driven pulley on generator as "d" and speed of generator as "r." Then:

$$d = DR \div r$$

Substituting the values: D equals 36 inches, R equals 325 r.p.m., and r equals 1,480:

$$\frac{36 \times 325}{1{,}480} = 7.97 \text{ inches,}$$

so an 8-inch pulley should be used on the generator to secure the desired speed.

How Is Shrinkage of Oil Between Reservoir and Surface Computed?

Can you give me a method for computing the difference in space occupied by a barrel of oil in the reservoir and after it has been reduced to atmospheric pressure at the surface?—E. U. N.

The engineering committee for the Hobbs field, New Mexico, is quoted in R.I. 3,316, a U. S. Bureau of Mines recent publication on West Texas and southeastern New Mexico oil fields as follows:

"Solubility tests made to determine the quantity of natural gas in solution in the crude oil revealed an average solubility of 670 cubic feet of gas per barrel of oil at a pressure of 1,400 pounds per square inch, absolute. Shrinkage tests made at the same time showed that, due to the dissolved gas, 1 bbl. of oil measured on the surface occupied space in the reservoir equivalent to 1.24 bbls. or 6.95 cubic feet.

"By Boyle's law ($PV = P' V'$), it was computed that 692 cubic feet of free gas measured on the surface occupied a space in the reservoir equal to 1 bbl. (5.61 cu. ft.) at the average reservoir pressure of 1,374 pounds per square inch (gauge). This was calculated by substituting the following values:

$V' = 5.61$ cu. ft. = volume of 1 bbl.

$P = 13.2$ lbs. per sq. ft. = atmospheric pressure at Hobbs, N. Mex.

$P' = 1{,}374 + 13.2 = 1{,}387.2$ average reservoir pressure (absolute).

$$PV = P' V'$$

$$V = \frac{1{,}387.2 \times 5.61}{13.2} = 589.6 \text{ cu. ft.}$$

Percentage deviation of this gas from Boyle's law is 1,387.2 absolute = 17.36 per cent (assumed by Hobbs Engineering Committee); hence,

$$589.6 \times 1.1736 = 692 \text{ cu. ft.}$$

"Therefore, it was deduced that if 670 cubic feet of gas was in solution at the existing reservoir pressure, then all gas produced in excess of that amount should be regarded as undissolved or free gas. Maximum efficiency is obtained when only the gas in solution is produced with the oil and the free gas remains confined in the reservoir for subsequent use. In the Hobbs field, with a reservoir pressure of 1,400 pounds per square inch (absolute), this would mean, theoretically, that only 1.24 bbls. of space should be voided by each barrel of oil produced."

Principles of Cathodic Protection for Pipe Lines Explained

In the recent Pipe Line edition of The Oil and Gas Journal I note an article about cathodic protection for pipe lines in which it is stated the subject has been covered by articles in the oil trade journals but I have not read any of them and would like to know something about the principles governing this form of pipe line protection.—T. E. N.

An article by Starr Thayer published in The Oil and Gas Journal pipe line edition of 1935 on page 120 gives a good explanation of the principles of cathodic protection and also a description of one method of making an installation. A brief description taken from that article is given but you are referred to the article itself for more details.

Direct current is used to create a flow of direct current along the pipe line. The current may be secured by using a form of rectifier which converts alternating into direct current. This piece of apparatus is described by Mr. Thayer's article in the September 24, 1936, issue of The Oil and Gas Journal. Gas engine-driven generators and wind-driven generators are also used, all having some particular advantage.

The direct current is conducted by copper cable strung upon poles to a ground bed. This ground bed is a mass of scrap iron buried in a hole preferably dug in moist earth about 300 to 500 feet from the pipe line. To lower earth resistance the dirt removed from the hole is mixed with several hundred pounds of rock salt before the scrap iron is covered with it.

The current from the generator is delivered by the copper wire to the bed filled with scrap iron and leaves it and seeks a return path to the generator. This path is provided by welding to the pipe line at some point at some distance from the ground set a connection which leads to the negative side of the generator. The current then tends to travel through the earth from the pit to the pipe and along the pipe to the takeoff connection and back to the generator on overhead wire.

The direct current is of low voltage and low amperage but it forms an electric shield over the outside of the pipe to be protected and in this way prevents currents within the pipe from leaving it and entering the soil. Preventing currents from leaving the pipe except at prepared points of exit will retard corrosive action and protect the pipe line from material damage.

No Recent Articles Have Been Published on Tapered Strings of Tubing

I have a flowing oil well with gas pressure gradually declining and I wish to try tapered tubing instead of putting it on the pump. Has your magazine printed any articles concerning the use of tapered tubing within the last two years?—G. D. C.

No article on tapered tubing has appeared in The Oil and Gas Journal within two years.

In The Oil and Gas Journal of October 8, 1931, on page 14, there is an article by R. R. Hawkins on use of tapered tubing. This is also published with discussions in the 1932 Transactions of the Petroleum Division of the A.I.M.E. on page 306.

Another article by John T. Hayward on tubing was published in The Oil and Gas Journal on March 3, 1932, page 16. That article was also published in the 1932 Transactions of the A.I.M.E. on Page 367.

It is suggested you read all of these articles on tapered and straight tubing in order to secure the views of engineers on both sides of this problem.

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Daily Crude Run Schedules Lowered in Mid-Continent During December

By D. H. STORMONT

Daily crude runs to refineries in the Mid-Continent are being decreased by approximately 12,500 bbls. during December, according to estimates made at the first of the month, as refiners continue holding their runs to stills at high levels to supply a record-breaking demand for burning oil and furnace oils. The daily total of 535,500 bbls. exceeds runs to stills of December, 1935, by some 24,000 bbls. and thus enabled refiners to complete the year with each monthly total for 1936 being higher than those of 1935 in all instances. In fact each monthly total during 1936 set new 6-year peaks with but few exceptions.

While the demand for furnace oils is no doubt responsible to a large degree for the high refining schedules being maintained this month, the possibility of a general crude price advance the first of the year is also probably causing refiners to hold runs at high levels. Gasoline consumption continued in exceptionally good volume throughout the fall so that stocks held by Mid-Continent refiners were reduced to fairly low margins. Thus refiners who purchase their crude are holding runs high to build up their gasoline stocks so that they might profit to the extent of any price advance. This is anticipated in view of the price increases announced recently by the Continental Oil Co. and Barnsdall Oil Co. Inc., to be effective January 4, 1937.

GREATEST DECREASE IN OKLAHOMA

Oklahoma again leads the various districts in the amount of crude run reduction, daily runs being reduced by 5,220 bbls. for December. The majority of refiners in this district are maintaining their daily runs at November levels with several companies reporting increases for the month. The Okmulgee plant of the Barnsdall Oil Co. is remaining closed down during the month and also the Blackwell plant of Globe Oil & Refining Co.

Arkansas was the only district to show an increase for the month. This district has steadily increased runs all through the present year until the present total of 24,225 bbls. daily establishes a new peak for the year. Berry Asphalt Co. and Lion Refining Co. are increasing their daily runs by a total of 700 bbls. and the remainder of the companies are operating their plants at November levels.

All of the other Mid-Continent districts show slight decreases in total daily runs to stills, the Panhandle with a decrease of 3,590 bbls. daily being the largest. Cosden Oil Co. is decreasing runs to its Big Spring refinery by 2,000 bbls. daily. Other refineries showing decreases are those of Danciger Refineries, Inc., Phillips Petroleum Corp., and Shamrock Oil & Gas Corp. The plants of Moutray Oil Co. and West Texas Refining Co. show slight increases for the month.

A comparison with a year ago shows that North Louisiana has made a great advance in new plants and added capacity, the district advancing from sixth place to fifth in importance. Both plant capacity and daily crude runs have been greatly enlarged, the plant capacity increasing from 54,500 bbls. daily to 64,450 bbls. and daily crude runs from 27,850 to 46,100 bbls. daily. The number of operating plants has also increased.

While the other districts have not made such a comparative growth in plant capacity and daily runs to stills, the number of operating plants has increased in all districts with the exception of East Texas. Also the capacity of operating plants has shown an increase in most districts although the total refining capacity decreased.

REFINED PRICES HIGHER

A study of quotations on Mid-Continent refined products shows that the prices of the various products have not been consistently higher throughout the year than those of 1935. Practically all have fallen below the 1935 price at some time or other during the year. However, the averages for the year will no doubt be higher than those of 1935 and the refining industry will again be able to record a successful and profitable year.

Since gasoline is the principal refined product, a comparison of 1935 and 1936 Mid-Continent quotations should give some idea of the relative earnings as based on the price of crude oil. The average price of 68-70 octane U. S. Motor gasoline in 1935 was .0492 cent per gallon, while in 1936 the average will approximate .0588 cent. The average price of crude in 1935 was $1 and in 1936 will be in the neighborhood of $1.10. Therefore, the average price of refinery gasoline has increased 19 per cent, while the average price of crude oil has increased but 10 per cent.

Mid-Continent Crude Runs

Average Daily (Barrels)

(Advance estimate compiled by The Oil and Gas Journal)

	1934	1935	1936
January	448,360	426,070	501,600
February	456,619	448,810	519,960
March	465,680	451,510	478,760
April	458,220	467,765	506,775
May	457,165	466,015	513,510
June	459,908	485,015	527,225
July	477,012	494,210	539,370
August	501,750	508,960	557,650
September	499,830	541,080	553,215
October	500,755	533,620	536,330
November	500,445	524,475	548,015
December	440,735	511,025	535,500

Operation by Refinery Districts

Daily crude runs

	Dec.	Nov.	Decr.
Arkansas	24,225	23,525	*700
East Texas	62,310	63,675	1,365
Kansas	127,640	128,990	1,350
N. Central Texas	42,625	43,465	840
North Louisiana	46,100	46,700	600
Oklahoma	139,630	144,850	5,220
Southwest Texas	22,030	22,280	250
W. Tex. Panhandle	70,940	74,530	3,590
Total	535,500	548,015	12,515

*Increased.

Estimated Daily Average Mid-Continent Refinery Crude Runs for December

ARKANSAS

Company and location—	Daily capacity	—Av. dly. runs— Dec.	Nov.
Berry Asphalt Co., Waterloo	2,000	1,000	800
Henry H. Cross Co., Smackover	6,000	5,000	5,000
Lion Oil Ref. Co., El Dorado	12,000	10,000	9,500
Macmillan Pet. Corp., Norphlet	2,500	2,000	2,000
Ouachita Valley Ref. Co., El Dorado	2,500	(*)	(*)
Root Pet. Co., El Dorado	10,000	6,000	6,000
Stephens Ref. Co., Stephens	750	225	225
Total	35,750	24,225	23,525

*Shut down.

EAST TEXAS

Cascade Ref. Co., Reed Switch	3,000	1,700	1,600
Chief Ref. Co., Gladewater	2,000	220	140
Clay Ref. Co., Arp	2,500	1,300	1,290
Danciger Refineries, Inc., Longview	10,000	4,000	4,000
East Texas Ref. Co., Longview	10,000	6,000	6,050
General American Ref. Co. No. 1, Gladewater	4,000	2,600	3,170
General American Ref. Co. No. 2, Overton	5,500	3,310	3,015
General American Ref. Co. No. 3, Arp	4,000	2,510	1,545
Hurricane Pet. Corp., Overton	5,000	3,480	4,000
Hurricane Pet. Corp. Arp. Ref., Arp	3,750	2,400	3,000
M. S. Johnson Ref. Co., Gladewater	1,000	155	(*)
Kilgore Ref. Co., Inc., Kilgore	4,000	1,685	1,380
Magnolia Pet. Co., Corsicana	5,000	3,500	3,500
Master Pet. Co., Waco	1,000	(*)	300
Ocean Pet. Corp., Kilgore	3,000	2,000	1,270
Premier Oil Ref. of Texas, Willow Springs	4,500	3,000	3,000
Panama Ref. Co., Kilgore	3,000	(*)	3,500
Royal Oil & Ref. Co., Kilgore	3,000	(*)	(*)
Sinclair Ref. Co., Camp Switch	3,500	2,000	2,000
Solvex Refineries, Inc., Gladewater	4,500	3,000	3,000
Southport Pet. Co., Kilgore	5,000	3,000	3,000
Texas Co., The, Dallas	16,000	7,000	7,000
Texas Oil Products Co., Gladewater	3,000	1,905	1,200
Trinity Ref. Co., Gladewater	6,000	2,100	2,100
Tower Ref. Co., Overton	3,000	1,580	2,275
Tyler Texas Ref. Co., Tyler	10,000	3,950	2,210
Wichita Ref. Co., Gladewater	500	70	130
Total	128,250	62,310	63,675

*Shut down.

KANSAS

Barnsdall Oil Co., Wichita	6,000	4,500	5,000
Chase Ref. Co., Chase	1,000	550	550
Cusco Oil & Ref. Co., Chase	3,100	(*)	(*)
Derby Oil Co., Wichita	8,000	5,000	5,000
Dickey Ref. Co., McPherson	2,500	1,700	1,700
El Dorado Ref. Co., Eldorado	5,000	3,500	3,500
Falcon Ref. Co., Inc., Great Bend	800	500	650
Globe Oil & Ref. Co., McPherson	12,000	10,500	10,500
Kanotex Ref. Co., Arkansas City	12,000	5,500	5,500
Kansas Gasoline Co., Winfield	150	40	40
Kreuger Ref. Co., Laton	150	50	50
National Ref. Co., Coffeyville	8,000	5,000	5,000
Pet. Products Co., Chanute	1,000	800	800
Phillips Pet. Co., Kansas City	18,000	13,400	13,800
Russell Ref. Co., Russell	1,250	600	700
Shell Petroleum Corp., Arkansas City	20,000	19,000	20,000
Sinclair Ref. Co., Coffeyville	20,000	8,500	8,500
Sinclair Ref. Co., Argentine	11,000	7,000	7,000
Skelly Oil Co., Eldorado	23,000	17,500	17,500
Socony-Vacuum Oil Co., Inc. Augusta	17,000	16,000	15,000
Standard Oil Co., (Indiana), Neodesha	20,000	5,500	5,500
Vickers Pet. Co., Potwin	3,500	2,500	2,700
Total	193,450	127,640	128,990

*Shut down

NORTH LOUISIANA

Acme Ref. Co., Monroe	100	50	50
Atlas Pipe Line Co., Shreveport	12,500	7,000	7,000
Bayou State Oil Corp., Houston	750	400	350
Griswold Refineries, Shreveport	2,500	1,000	1,000
Griswold Refineries, Sandra	5,000	2,000	2,000
Louisiana Oil Ref. Co., Bossier City	25,000	21,000	21,000
North Caddo Refinery, Rodessa	1,000	600	500
Pelican Ref. Co., Converse	100	50	50
Rodessa Oil & Ref. Corp., Cedar Grove	7,500	5,000	5,000
Shoreline Oil Co., Lewis	5,000	5,000	5,000
Stanolind Oil & Gas Co.,			

Company and location—	Daily capacity	Av. dly. runs— Dec.	Nov.
Superior	5,000	4,000	4,750
Texas Co., Shreveport	1,000	(*)	(*)
Total	64,450	46,100	45,700

*Shut down.

NORTH CENTRAL TEXAS

Allstate Ref. Co., Thrall	2,500	(*)	(*)
Baird Ref. Co., Baird	1,500	1,200	1,300
Continental Oil Co., Wichita Falls	6,000	4,000	4,000
Crown Oil Co., Fort Worth	1,200	700	700
Exchange Pet. Corp., Albany	800	200	200
Falls Ref. Co., Wichita Falls	2,000	300	300
Gainesville Ref. Corp., Gainesville	2,500	1,200	1,500
Gratex Ref. & Fuel Oil Co., Graham	500	300	300
Gulf Ref. Co., Fort Worth	10,000	7,000	7,000
Hightower Oil & Ref. Corp., Brownwood	750	100	100
Jacksboro Ref. Co., Jacksboro	50	50	50
La Salle Pet Co., Burkburnett	3,500	800	800
Magnolia Pet. Co., Fort Worth No. 1	12,000	5,800	5,800
Marathon Oil Co., Fort Worth	5,000	3,900	4,330
Norgold Ref. Co., West Olney	400	200	200
Olney Oil & Ref. Co., North Olney	3,500	1,800	1,500
Panhandle Ref. Co., Wichita Falls	3,300	2,350	2,700
Panhandle Ref. Co., Lueders	1,000	500	635
Pilot Point Ref. Co., Pilot Point	500	100	100
Sinclair Ref. Co., Fort Worth	5,000	3,000	3,000
Southland Ref. Co., Megargel	500	200	200
Taylor Ref. Co., Taylor	6,000	800	800
Taxman Ref. Co., Wichita Falls	3,500	2,500	2,000
Texas Pacific Coal & Oil Co., Caddo	350	175	175
Texas Pacific Coal & Oil Co., Strawn	125	50	50
Tucker Ref. Co., Wichita Falls	250	200	175
Tylad Refining Co., Gainesville	2,000	1,500	1,500
Wagoner Ref. Co., Electra	6,000	3,700	3,000
Total	80,725	42,625	43,465

*Shut down.

OKLAHOMA

Anderson-Prichard Oil Corp., Cyril	6,000	4,500	4,500
Barnsdall Oil Co., Barnsdall	6,000	3,500	3,500
Barnsdall Oil Co., Okmulgee	10,000	(*)	(*)
Bell Oil & Gas Co., Grandfield	5,000	3,200	3,000
Black Gold Ref. Co., Oklahoma City	3,000	2,000	2,000
Champlin Ref. Co., Enid	16,000	6,500	6,500
Continental Oil Co., Ponca City	30,000	16,000	16,500
Cushing Ref. & Gasoline Co., Blackwell	1,700	1,700	1,700
Cushing Ref. & Gasoline Co., Cushing	6,200	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	2,500
Empire Oil & Ref. Co., Okmulgee	4,000	2,100	2,500
Empire Oil & Ref. Co., Ponca City	12,000	8,500	9,000
Globe Oil & Ref. Co., Blackwell	8,000	(*)	(*)
Johnson Oil Ref. Co., Cleveland	6,000	4,000	4,200
Marathon Oil Co., Bristow	5,000	2,740	3,000
Mid-Continent Pet. Corp., West Tulsa	40,000	19,200	19,700
Omar Ref. Co., Garber	8,000	2,500	2,500
Peppers Gasoline Co., Oklahoma City	500	500	500
Phillips Pet. Co., Okmulgee	6,000	4,700	4,000
Pure Oil Co., Muskogee	10,000	8,380	8,200
Rock Island Ref. Co., Beckett	6,000	2,500	2,500
Sinclair Ref. Co., Sand Springs	8,000	4,500	4,500
Sooner State Ref. Co., Oklahoma City	700	350	350
Sun Oil Co., Yale	5,000	2,000	2,500
Sunray Oil Co., Allen	7,000	3,000	3,000
Texas Co., West Tulsa	15,000	11,000	11,000
Tide Water Oil Co., Drumright	15,000	8,000	12,500
Triangle Prod. & Ref. Co., Oklahoma City	1,500	800	1,000
S. L. West Ref. Co., Oklahoma City	1,000	200	200
Wilcox Oil & Gas Co., Bristow	6,000	2,260	2,000
Yale Oil Corp., Yale	2,000	(*)	(*)
Total	265,600	139,630	144,850

*Shut down.

SOUTHWEST TEXAS

Amsco Ref. Co., Mirando City	4,500	3,600	3,150
Humble Oil & Ref. Co., San Antonio	5,000	2,900	2,900
Imperial Gasoline Corp., Houston	4,000	700	700
Ina Oil & Ref. Co., Hondo	400	50	50
Magnolia Pet. Co., Luling	8,000	6,100	6,900
Pettus Oil & Ref. Co., No. 1 Pettus	1,000	800	700
Pettus Oil & Ref. Co., No. 2, Pettus	1,000	850	850
Phoenix Ref. Co., San Antonio	1,200	1,000	1,000
Phoenix Ref. Co., Bruni	900	600	600
Pioneer Oil & Ref. Co., Somerset	2,000	1,200	1,200
Rado Ref. & Prod. Co., McAllen	500	250	250
Ranne Ref. Co., Mathis	1,000	500	500
Rio Oil & Ref. Co., Sullivan City	1,000	300	300
Texas Co., San Antonio	3,000	3,000	3,000
Valley Ref. Co., Harlingen	1,000	180	180
Total	34,500	22,030	22,280

*Shut down.

WEST TEXAS AND PANHANDLE

Company and location—	Daily capacity	Av. dly. runs— Dec.	Nov.
Aero Ref. Co., Pecos	200	100	100
Coltex Ref. Co., Colorado	12,500	8,000	8,000
Concho Ref. Co., San Angelo	250	100	100
Cosden Oil Co., Big Spring	12,500	10,000	12,000
Danciger Refs., Inc., Pampa	6,500	4,500	5,000
Gibson Oil Corp., Magic City	250	150	150
Gulf Ref. Co., Sweetwater	7,500	5,400	5,600
Howard County Ref. Co., Big Spring	1,500	600	600
McNutt Ref. Co., El Paso	2,000	750	750
Moutray Oil Co., Hawley	1,200	1,200	740
Onyx Refining Corp., Hawley	1,500	1,000	1,000
Panhandle Ref. Co., Kings Mill	2,000	1,650	1,650
Phillips Pet. Co., Borger	50,000	20,800	21,500
Shamrock Oil & Gas Corp., Sunray	2,500	1,250	1,500
Standard Oil Co. of Texas, El Paso	14,000	6,600	6,500
Shamrock Oil & Gas Corp., Meldavis	1,600	1,250	1,400
Starlight Ref. Co., Ballinger	500	150	150
Texas Co., El Paso	2,000	1,000	1,000
Texas Co., Amarillo	4,000	2,800	2,800
West Texas Ref. Co., Pecos	6,000	1,500	500
Western Ref. Co., Mertzon	1,000	400	400
West Texas Oil & Ref. Co., Sweetwater	60	40	40
Wickett Pet. Co., Wickett	2,500	1,700	1,700
Total	126,760	70,940	74,530

*Shut down.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ending November 21 totaled 289,454,000 bbls., according to the Bureau of Mines, a decrease of 510,000 bbls., comprising a decrease of 818,000 bbls. in stocks of domestic crude oil and an increase of 308,000 bbls. in stocks of foreign crude. Daily average crude runs to stills were approximately 2,995,000 bbls., a gain of about 95,000 bbls.

STOCKS OF CRUDE PETROLEUM

(Barrels of 42 gallons)

Grade of crude oil—	Nov. 14	Nov. 21
Pennsylvania Grade	4,139,000	4,086,000
Other Appalachian	595,000	625,000
Lima-N. E. Indiana-Michigan	936,000	984,000
Illinois-S. W. Indiana	9,858,000	9,818,000
N. Louisiana and Arkansas	10,510,000	10,681,000
West Texas and S. E. New Mexico	28,564,000	28,716,000
East Texas	18,522,000	18,381,000
Other Mid-Continent	115,885,000	115,537,000
Gulf Coast	26,719,000	26,076,000
Rocky Mountain	25,404,000	25,465,000
California	30,523,000	30,478,000
Foreign	1,649,000	1,967,000
Total reported weekly	273,364,000	272,804,000
Estimates of unreported stocks	16,600,000	16,650,000
Total stocks	289,964,000	289,454,000

Livermore Oil Pool

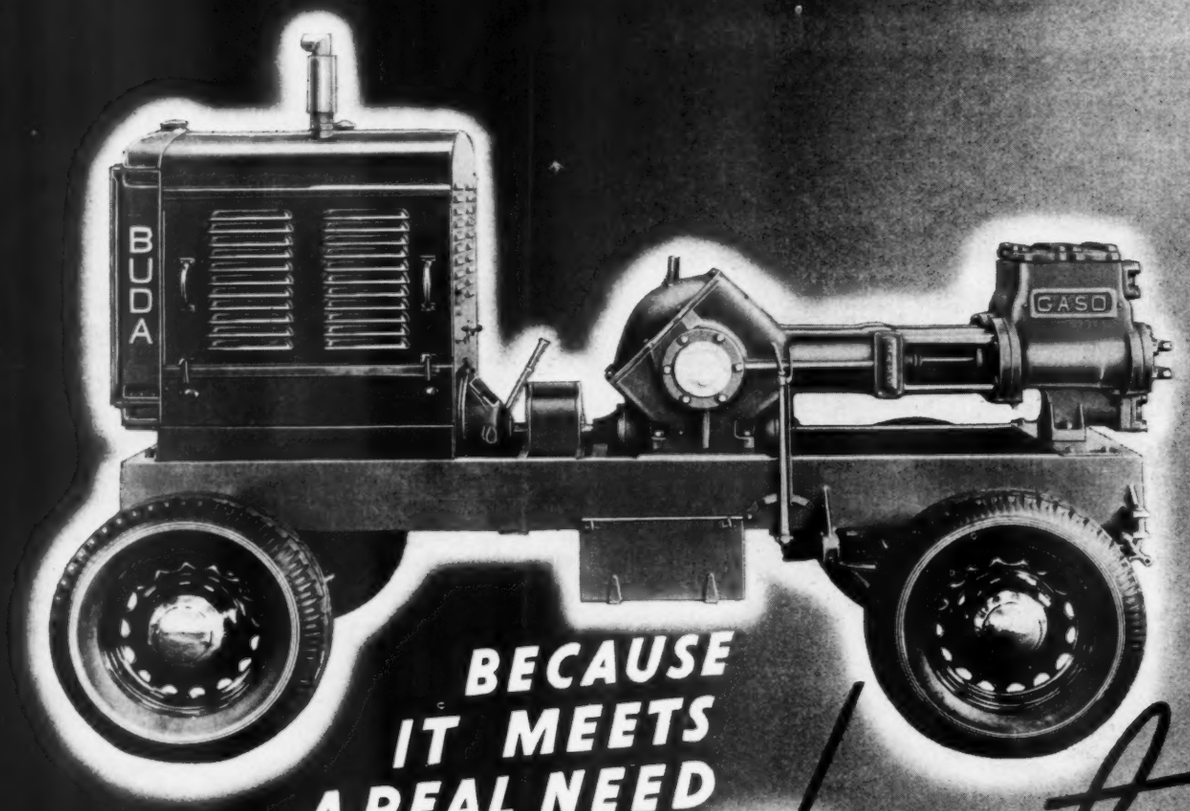
The Kentucky Oil and Gas Association recently published, in cooperation with the Department of Mines and Minerals at Lexington, the "Geology of the Livermore Oil Pool," which was prepared by George R. Wesley, assistant state geologist. The report with maps has been made available to the public by the association, of which Earl D. Wallace of Lexington is president.

SECOND DEEPEST TEST DRILLED IN INDIANA

Left to right: J. L. Hassett, C. I. Tustin, Carl Shafer, Noble Liddle, H. L. Padget, W. C. Carlton, Joe Shafer, contractor, and N. W. Tustin

INDIANAPOLIS, Ind.—The Dwight LaGrange well No. 1, in NW SW section 4-12n-4e, Johnson County, Indiana, is probably the second deepest well drilled in Indiana. It was abandoned as a dry hole at 4,087 feet, where salt water was obtained in quartzitic sandstone. The well started in the New Albany shale of Devonian age and tested the Corniferous, Niagaran, Trenton and St. Peter horizons, as well as the Lower Ordovician and Upper and Middle Cambrian. J. L. Hassett, of Franklin, Ind., drilled the well, with Joe Shafer of Robinson, Ill., as contractor on the job.

A well drilled near Greentown in Howard County, Indiana, considered the deepest well in the state stratigraphically, penetrated the Bayfield sandstone of Algonquian age, according to Doctor Logan. Using the same basis for correlation, the LaGrange well stopped in the Dresbach or Eau Claire sandstone of the Cambrian. Samples were collected from 1,530 feet to the bottom of the hole, which, Ralph E. Esary reports, are being studied by the Indiana Survey.



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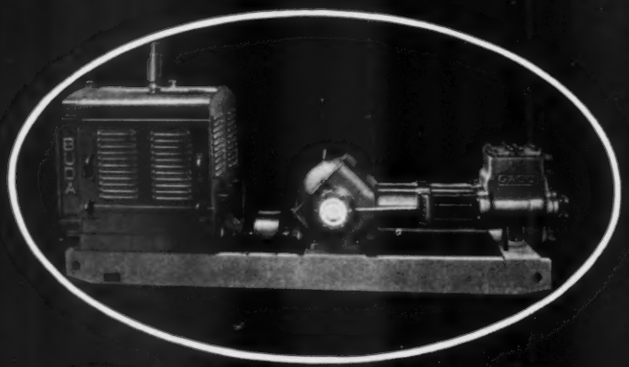

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FIELD OPERATIONS

Summarizing the Week's Developments

A southeast extension well in the Moore pool, Cleveland County, Oklahoma, was given a rating of 30,024 barrels, based on a flow of 5,281 barrels in 4 hours. Four other Moore wells were nearing completion, two being extension wells. A Noble County wildcat north of Lucien was showing oil. A new area was opened by a small producer northwest of Holdenville, Hughes County. A pool opener was completed as a large gas well in northern Lincoln County.

TEXAS

Eleven wells were completed in the Talco pool in Titus and Franklin counties, Texas, and 30 wells are drilling. Four wildcats in Freestone, Upshur, Henderson and Fannin in Eastern Texas were abandoned as failures. In the lower Gulf Coast of Texas a new pay sand was discovered in the Taft field, and in the Southwest Texas area oil was discovered in the Plummer gas field. In West Texas a test that was expected to make an important link between a pool in northern Winkler County and another in southern Lea County, New Mexico, proved a relatively small well. The Anahuac field in Chambers County was extended 2,000 feet and the Amelia field was extended 1,000 feet. Much interest was centered on a test on the LaBelle Prospect in Jefferson County.

KANSAS

The Trapp pool, southern Russell County, was extended one-fourth mile southeast. Five large producers were completed in the area. Big producers were completed in the Warkentin pool, Harvey County, and Lerado pool, Reno County. The Wellington pool was extended to the southwest. Wildcats in Stafford, Ellis, Barton, Rice and Woodson counties were showing as pool openers.

LOUISIANA-TEXAS

Of the interesting Rodessa outpost tests in Caddo Parish, Louisiana, one near the town of Ida swabbed dry, and the other 3½ miles north of the field, flowed 205 barrels in 24 hours, but it is believed by some authorities to be on a separate structure as the oil is of higher gravity than Rodessa crude and of different color.

CALIFORNIA

Prospects for a new oil pool 7 miles north of the Ten Section pool in Kern County, California, as 35 feet of good oil sand was cored in the test. The Ventura Avenue field was extended 1,000 feet by a 1,140-barrel well.

EASTERN FIELDS

The old Greene County, Pennsylvania area, after over 50 years of development, surprised with a new oil pool in a gas field, the discovery well starting at 100 barrels per day.

WESTERN CANADA

A new well variously estimated at from 500 to 2,000 barrels per day extended the Turner Valley field in Alberta, Western Canada, a long way south and west. It is said to be the largest well ever brought in in that field.

NEW MEXICO

Eighteen new oil wells and one gas well were completed in Lea County. Four new wells in the Monument area had natural initial production in excess of 2,000 barrels each, and two wells exceeded that total after acidizing. A 230-barrel well in the shallow Rattlesnake dome pool was a feature.

MICHIGAN

Twenty-six wells were completed in Michigan fields in the past week. The new pool in Arenac County starts off with a well good for 1,000 barrels.

Completions in All Fields

(Week Ending December 5, 1936)

	Oil	Gas	Dry	Total	1936 total comp. to date	1935 total comp. to date
Penna. Grade Fields	26	21	10	57	3,185	2,860
Lima Field	0	0	0	0	80	89
Central Ohio	3	9	7	19	411	297
Indiana	0	0	0	0	162	181
Illinois	0	0	0	0	27	11
Michigan	13	4	9	26	626	558
Kentucky	9	0	2	11	275	236
Kansas	22	0	10	32	1,552	1,146
Oklahoma	32	5	6	43	2,283	1,893
North Central Texas	24	0	19	43	2,317	2,462
West Texas	46	0	2	48	1,486	782
Texas Panhandle	15	3	0	18	610	670
East Central Texas	11	0	5	16	371	240
East Texas	43	0	0	43	2,320	3,977
East Texas border	12	0	0	12	136	10
Gulf Coast Texas	18	0	3	21	1,107	997
Southwest Texas	40	1	19	60	2,763	1,479
Total Texas	209	4	48	261	11,110	10,619
North Louisiana	9	1	3	13	585	316
Gulf Coast Louisiana	6	0	7	13	347	333
Total Louisiana	15	1	10	26	932	649
Arkansas	1	1	1	3	82	112
Montana	9	1	0	10	229	179
Wyoming	5	0	1	6	102	84
Colorado	0	0	0	0	26	18
New Mexico	19	2	1	22	554	317
Utah	0	0	0	0	5	5
California	14	0	8	22	1,154	1,045
Total United States	377	48	113	538	22,795	20,299
Total previous week	328	56	105	489		
Difference	49	8	8	49		

Outstanding Fields—Highlights

(Week Ending December 5, 1936)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	4	6	2	1,030	130	7,430
Hastings	2	9	1	529	110	6,337
Loma Novia	2	7	3	890	620	14,840
Seven Sisters	2	4	5	3,185	331	7,720
Saxet Heights	6	4	1	150	186	7,910
Saxet	3	40	7	960	271	18,400
Lopez	3	9	7	2,370	243	5,730
East Texas	45	98	43	1,522	21,805	450,000
Talco	22	30	10	1,626	130	9,437
OKLAHOMA						
Oklahoma City	2	12	3	14,130	1,083	113,575
Fitts	11	66	7	3,194	536	60,600
Burbank-So. Burbank	0	9	3	1,149	2,157	23,400
KANSAS						
Ellis County	4	12	0	0	65	3,755
Reno County	5	21	1	364	347	14,700
Russell County	4	48	9	15,345	523	26,853
Rice County	5	53	5	6,462	636	29,878
NEW MEXICO						
Lea County	10	93	18	21,761	494	73,660
LOUISIANA—TEXAS						
Rodessa, La.	4	13	6	4,141	330	58,668
Rodessa, Tex.	5	57	12	8,457	120	24,543
Gillis, La.	2	6	2	700	53	17,129
Tepetate, La.	2	4	0	0	36	5,718
MICHIGAN						
Porter-Yost	4	3	4	838	420	15,400
Crystal-Montcalm	7	8	0	0	143	3,810

Eastern Field Report

By STAFF CORRESPONDENT

NEW POOL IN S. W. PENNA.; DEEP TEST IN NEW SECTOR

PITTSBURGH, Pa., Dec. 7.—Another interesting deep test is starting in West Virginia. In Hancock County, John Galey has made a location for a test, scheduled for the Oriskany sand, on the Rachael E. Talbot farm in Grant district, 9½ miles southeast of the Oriskany gas well on the Margaret Jenkins farm in Madison Township, Columbiana County, Ohio, and about 14 miles southwest of the Oriskany gas well on the William Graham farm, in South Beaver Township, Beaver County.

The new location with reference to the Bench Mark 1337 a mile and a half south of Chester, is exactly 1.7 miles south 55 degrees west and has a ground elevation of 1,270 feet.

Forty-two operations were completed in the lower eastern fields during the past week of which 10 were dry holes, 21 gas wells and 11 producers with an initial production of 154 bbls. Included in these is an interesting 100-bbl. producer in southwest Pennsylvania which may open up a new local pool, and a deep sand gas well in southeast Ohio.

Southeast Ohio

In Columbiana County, southeast Ohio, the Natural Gas. Co. of West Virginia completed a deep test on the William Grafton farm in section 25, Wayne Township. It was completed in the Oriskany sand which was topped at 4,420 feet and after being twice shot, it is now being cleaned out for test. It has the appearance of a fair gas well. In Madison Township, this company is within 20 feet of the Oriskany sand in the test on the Finegold farm.

In Athens County, C. W. Nezum completed No. 3 E. A. Person near Canaanville in section 12, Lodi Township, in the First Berea at 1,431 feet. It is showing for 5 bbls. a day. Near Fisher in section 6, Lee Township, the Gibbs Farm Oil and Gas Co. completed a gas well on the A. B. Wingett farm in the Berea sand at 1,181 feet. It gauged 213,000 feet a day.

In the City of Cleveland, Cuyahoga County, H. McGrath completed a small gasser on the Bradford and Averill Lot, West 19th Street and Freelan Avenue, in the Newburg sand. It may later be deepened.

In Jefferson County, Wasmouth and Delong drilled No. 5 Minnie Otte farm in section 27, Steubenville Township, through the Berea sand to 1,285 feet. It is dry.

In Licking County, G. F. Early and others completed No. 3 George O. Wilson in section 11, Mary Ann Township, in Berea sand at 765 feet. It produced 4 bbls. the first day after shot. In the southeast quarter of section 14, Bowling Green Township, Murphy Oil Co. drilled a test on the Martha A. Lynn farm through the Clinton sand to a depth of 2,935 feet. It had a small showing of oil and gas and is being plugged. In the northwest quarter of section 2, Hanover Township, the Edward H. Everett Co. drilled No. 15 on the Felix Montgomery farm through the Clinton sand to 2,960 feet. It was a dry hole.

In Lorain County, Ohio Fuel Gas Co. completed a test on the C. Schultz farm in section 81, Columbia Township, in the Clinton sand at a depth of 2,810 feet. It is a gas well gauging 700,000 feet a day.

In Medina County, E. R. Edson and Son Co. completed No. 36 W. H. Wideman, Tract 10, Lot 3, Chatham Township, in the Berea Grit at 510 feet. It produced 3 bbls. the first day after shot. On Tract 14, Lot 5, same township, these operators drilled No. 38 on the William P. Wertz farm through the same formation to 420 feet. It was dry.

In Muskingum County, Ohio Fuel Gas Co. completed a test on the William Keckle farm in the southwest quarter of section 22, Newton Township, in the Clinton sand at 3,520 feet. It is a gas well gauging 500,000 feet a day. In the southwest quarter of section 25, Newton Township, William Cline and others drilled a test on the William Kilpatrick farm through the Clinton sand to 3,840 feet. It had only a light showing of gas.

In Perry County, Wehrle Co. completed a second test on the George F. Shrider farm in the southwest quarter of section 31, Hopewell Township, in the Clinton sand at 2,805 feet. It is a gas well gauging 1,000,000 feet a day. In the southwest quarter of section 7, Reading Township, Preston Oil Co. completed a small gas well in the test on the William Lehman farm. It was drilled in the Clinton sand, depth 2,960 ft., and gauges 100,000 feet a day. In the northwest quarter of section 5, Reading Township, Planet Oil Co. and others completed No. 3 on the Thomas Vansickle farm as a gas well gauging 500,000 feet a day from the Clinton sand at a depth of 2,990 feet. In the southeast quarter of section 28, Monroe Township, Ruth and Strong completed No. 18 on the William Nuzum farm in the Berea sand at a depth of 1,044 feet. It is an oil well and made 10 bbls. the first day after shot.

In Washington County, S. S. Stewart and others completed No. 3 on the Russell Heslop farm on Gossetts Fork in section 19, Liberty Township, as a gas well gauging 10,000 feet a day from the Second Cow Run sand at 1,060 feet. It is 1,000 feet east of No. 2. In section 13, Barlow Township, Bode and Thomas drilled a test on the R. S. Cunningham farm through the Maxon sand to 1,247 feet and was a dry hole.

Southwest Pennsylvania

The important deep test of American Natural Gas Co. and T. W. Phillips Gas & Oil Co. on the Paul Fanker farm 1 mile north of Zelienople in Butler County appears to be dry in the Oriskany sand. After drilling through 156 feet of Corniferous lime, the top of the Oriskany sand was reached at 5,338 feet and the tools are 14 feet in the sand and is making about 5 gallons of salt water an hour.

In Slippery Rock Township, Lawrence County, the deep test of Carnegie Natural Gas Co. is now drilling in the Corniferous lime on the Reichel farm. Black shale was found at 4,533-63 feet and the Brown hard lime (Corniferous) at 4,563 feet. The present depth is 4,632 feet.

In South Union Township, Fayette County, the deep test of William Snee and others on the Summit Hotel property on Chestnut Ridge is now down 4,750 feet after recovering the bailer. The sand pump was lost to a cave and the tools are within 25 feet of it.

The deep test of Norwood Johnston and others on the James McBurney farm in Mount Pleasant Township, Washington County, has started drilling by the lost tools. After starting, work was delayed with a broken sand pump in the hole, which was recovered. In Independence Township, Beaver County, the tools lost below 4,800 feet have been cemented in by Laughner-Wittmer on the William Wilsman farm and they will be drilled by.

Three wells were completed in southwest Pennsylvania during the week, one of which was a fair producer which is located some distance from production. In Washington Township, Greene County, about 1¾ miles north of Ruff Creek Crossing, Crayne Run Gas Co. deepened their No. 1 on the Jacob Johns farm, a former gas well, from the Gas sand. The top of the Fifty-Foot sand was reached at 2,678 feet with some gas at 2,679 feet and at 2,685 feet, it started flowing oil. It made 100 bbls. in the first flow. There is no pool nearer than 4 miles of this well.

In Allegheny County, W. H. Say & Co. completed a second test on the E. Cope farm in Franklin Township in the Hundred-Foot sand at a depth of 1,540 feet. It is a 4 bbl. pumper.

In Green County, Equitable Gas Co. drilled a test on the Dr. A. B. Core farm in Greene Township, and was dry. The Thirty-Foot sand was at 2,505-16 feet with some gas; the Elizabeth sand at 3,006-18 feet with a showing of gas. The total depth was 3,089 feet.

In Center Township, Greene County, Penn Ohio Oil & Gas Co. spudded in on the W. L. Funk farm. Carnegie Natural Gas Co. is building the rig for No. 2 J. W. Milliken.

In Amwell Township, Washington County, Union Gasoline & Oil Corp. is drilling at 2,925 feet on the Martha Hazlett No. 2, and 355 feet on the M. Varner farm. South Penn Oil Co. is down 1,850 feet on the J. Q. Zimmerman No. 3 Wise Oil & Gas Co. has reached 2,550 feet on the C. W. Dunn farm. The Gantz sand was at 2,504 feet with the hole full of water at 2,527 feet.

West Virginia

Several small producers were completed in West Virginia during the week. In Gilmer County, Gilco Oil & Gas Co. completed No. 3 on the J. A. Thompson farm in Troy district at a depth of 2,500 feet. The Big Lime was at 2,015-65 feet; Gantz sand 2,456-87 feet with gas at 2,465 feet gauging 70,000 feet a day and 5 bbls. from the Salt sand.

In Wood County, I. M. Adams, trustee for the Wynoka Oil Co., completed No. 5 on the John Lenhart farm in Walker district at a depth of 1,840 feet. It is producing 5 bbls. a day from the Maxon sand topped at 1,591 feet.

In Lincoln County, Roy and McComas drilled No. 1 on the Lewis R. Sweetland farm some years ago as a Beren sand gas well. Recently this has been making about 1 bbl. of oil a day through the casing and coming either from the Lime or Weir sand. It is located in Union district.

Gas Wells

In Calhoun County, M. E. Morley and others completed No. 2, W. E. and Martha Ellison farm, in Washington district at a depth of 1,816 feet, the Big Injun sand, as a gas well gauging 250,000 feet a day.

In Kanawha County, United Fuel Gas Co. completed No. 4628, L. D. Updegraff farm, in Big Sandy district in the Big Injun sand at a depth of 1,677 feet. It gauged 281,000 feet a day. In this district, T. W. Dodd and others completed a test on the Sallie Cart farm at a depth of 1,892 feet and has a volume of 200,000 feet a day before shot.

In Lincoln County, Hubball Gas Co. completed a gasser on the Dennis Roy farm in Sheridan district. Brown shale at 2,654-2,930 feet developed 192,000 feet of gas at 2,700 feet.

In Marion County, Victor E. Tennant completed a test on the Price Heirs farm in Lincoln district at 2,426 feet. It gauges 292,000 feet a day from the Fifty-Foot sand.

In Marshall County, Wasmuth and Callahan on the Robert J. Powers farm in Clay district got

(Continued on Page 80)

Southwest Texas District

By
GEORGE WEBER

OIL IN PLUMMER GAS FIELD; EXTEND LOMA NOVIA SAND

HOUSTON, Tex., Dec. 7.—Discovery of possible new production in Southwest Texas, together with numerous developments in wildcatting and field extension and new sand production made the past week an important one in that area. Considerable attention is directed toward the Edwards Plateau area, where two deep wildcats reached critical depths in the Edwards lime and tested for production. Oil production was opened in the Plummer field of Bee County. The Hoffman field of Duval County received what appears to be an important extension in the Loma Novia sand.

The Lower Coastal area figured largely in the week's developments, with a new sand brought into production in the Taft field of San Patricio County, increased drilling for the new deep sand in Saxet of Nueces County, and an important wildcat announcement in Aransas County. Offsetting somewhat, the new strikes, was the abandonment and failure of a few tests which had formerly shown promise of new oil development.

In Burleson County, the Red Bank Oil Co. No. 1 Grann has cored sand at 6,229-35 feet which shows slight stain and good oil odor, and was preparing for a test at the latest reports. The Edwards lime was topped at 6,226 feet and the test is bottomed at 6,241 feet. This test is running high in comparison with others drilled in the area, and opening of oil production in the Edwards lime is anticipated.

In Fayette County, near the Bastrop County border, Paul Teas No. 1 Vinklarek, 10 miles south of Smithville shows disappointing results. The wildcat, bottomed at 7,142 feet in the Edwards set 5½-inch casing at total depth and perforated at 7,122-39 feet. The well was swabbing sulfur water at the latest reports with no show of oil or gas. This test is the latest of several drilled in the general area, where oil shows have previously been encountered.

The oil showing discovered several weeks ago in the Rogers & Rogers No. 1 McLain, an Atascosa County wildcat located 4½ miles south of the Somerset field, is reported to be producing in that test this week at the rate of 50 bbls. per day. Whether it constitutes a new field or an extension to Somerset, remains for further exploration of the area. No new tests were announced for the area during the week.

New Pool in Bee County

In Bee County, the second test to be drilled in the Plummer gas area was completed for an oil well, marking another field for that area. The W. C. McBride, Inc. No. 1 Plummer is making an estimated 10 to 15 bbls. of oil per hour at 3,042 feet. In the same county, another oil producer was added to the Foley field when Miller and Donzis completed the No. 1-B Holzmark making 10 bbls. per hour.

An important development for the Hoffman field of Duval County is expected as a result of the Bridwell Oil Co. and Gorman Yoakam Drilling Co. No. 1 Hoffman located in Survey 117. The test, located on the east edge of the field cored the Loma Novia sand at 2,800-10 feet with a good show of oil and have set casing for an early production test. The well, if completed for commercial production, will bring into the field's limits considerable proven acreage. The test was drilled on a lease farmed out by the Plymouth Oil Co.

Saxet Field

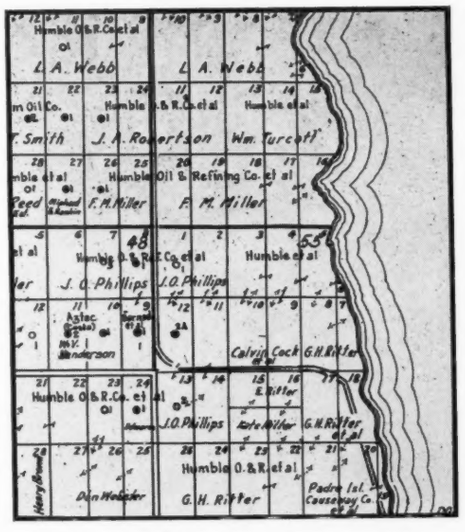
Nueces County activity centered in the Saxet field. The opening of a new deeper sand recently at 7,300 feet has been followed by exploration of the horizon at several points. One test bottomed in that sand, the Paul Benedum No. 1 Harmon, blew out shortly after perforating casing in the sand, and burned for about a day before successfully shut in. The strings of casing in the hole prevented it from cratering, and the well is now being killed.

There are seven tests either on the 7,300-foot or approaching it. Several are tests which have met with failure in the 5,800-foot Frio sand. Two of them, drilled by the Republic Natural Gas Co., are set on the sand and are expected to be completed early next week.

The drilling of twin wells to different sands in Saxet continues in the Clarkwood area, where production is found in 4,400-foot and 4,500-foot horizons. Another important development in that part of the field is shown in the announcement of two outpost tests. Bryant and Howell will drill No. 1 Kocurek in the Smith Survey No. 25, about a mile south of Clarkwood townsite. The test is 3,500 feet west and slightly north of the Nelson No. 1 Buckholt which was brought into production several months ago. The Stamex Oil & Gas Co. No. 1 Cox & Cryder is located about 1,000 feet southwest of the Buckholt well. These two tests will be watched with considerable interest by Nueces County operators.

Clara Driscoll Field

The Clara Driscoll field of Nueces County is due for early extensions, with two tests on sands attempting completion. The Magnolia Petroleum Co. No. 1 Clara Sevier has the sand at 3,817-20 feet which tested 1,680 feet of oil in 10 minutes. Casing has been set. W. D. Hines is attempting completion of the No. 1-A Sevier in section 60 of the Paul Subdivision, a northwest outpost test. A new deep sand at 5,710-30 feet corresponding to the Frio sand in Saxet was reported cored and casing has been set at total depth of 6,035 feet.



Flour Bluff field, on a peninsula bounded by Oso Creek and Laguna Madre in southeastern Nueces County, has six rigs drilling for the Humble Oil & Refining Co., Barnsdall Oil Co. and Flour Bluff Corp., joint holders of most of the acreage.—Porter Regenold, Maps, Corpus Christi)

Flour Bluff continues active with six rigs drilling, three of which are on the field sand, and will probably be completed early this coming week.

New Sand in Taft Field

A new sand was opened in the Taft field of San Patricio County during the week, when the Humble Oil & Refining Co. No. 10 Mayo was completed for 241 bbls. per day on a quarter-inch choke. The producer is bottomed in sand at 4,351-75 feet, an intermediate sand which had previously shown tests, but had not been brought into production. Three horizons now are producing in the field, the 4,900-foot discovery sand, the 3,900-foot sand and the newly opened 4,375-foot sand.

An important wildcat was begun in Aransas County during the week. The Barnsdall Oil Co. is drilling No. 1 Kate J. Edwards on Lot 87 of the Lamar townsite, about 9 miles northeast of the town of Rockport. This area has been receiving considerable lease play in the past several weeks, and many geophysical crews have been shooting in the vicinity of Rockport. The area lies in the trend of fields in Nueces, San Patricio and Aransas counties, and it is expected that the Barnsdall wildcat will be followed by several others.

Among the Wildcats

Wildcats in Nueces and San Patricio counties have attracted considerable attention during the past few weeks. In the former county, Allen and Seaboard Oil Corp. No. 1 Chapman tested 550 feet of fluid at 6,176-83 feet, which consisted of two-thirds oil and one-third salt water. The wildcat is now coring below 6,760 feet. In the same general area, about 12 miles southwest of Corpus Christi, the Cosner & Cosner No. 1 Stockton, recently taken over by the Wellington Oil Co. is drilling below 5,450 feet. This test recovered 700 feet of oil in sand at 4,720-26 feet, but was carried deeper. The Renwar Oil Corp. No. 1 Willoughby, a wildcat being drilled about 4 miles southeast of Driscoll is coring below 4,000 feet, and the George E. Smith (formerly G. M. Richardson) No. 1 Carter, 9 miles southwest of Corpus Christi, is drilling in shale below 6,100 feet.

An important Goliad County wildcat, Sun Oil Co. No. 1 Fromme, tested oily mud and salt water at 5,131-47 feet and was drilling ahead in sand at 5,147 feet at latest reports. The wildcat is located about 2 miles south of the California Co. No. 1 Langrebe, discovery well of the Weser field.

Lopez Field

The Lopez field of Webb and Duval counties, which is receiving the most active development of any of the Laredo district fields, will shortly be drilled on the northeast. The Humble Oil & Refining Co. staked two outpost locations in section 109, north of the production of Magnolia Petroleum Co. and Cox & Hamon. This marks the initial entry of the Humble company in the Lopez field.

A Webb County wildcat, Mid-Continent Petroleum Corp. No. 1 Laubscher was abandoned during the past week, ending temporarily expectations of new production in the prospect in northwestern Webb County. The test recovered 300 feet of drilling mud cut with gas and a distillate show at 2,909-89 feet, but failed to bring in commercial production.

Brooks County had a wild well for a short time, as the California Co. No. 2-B Garcia blew out in a gas sand at 2,448 feet and blew mud, gas and sulfur water before being shut in. The test will be carried deeper.

California Field Report

By
L. P. STOCKMAN

PROLIFIC KERN COUNTY HAS GOOD PROMISE OF NEW POOL

LOS ANGELES, Calif., Dec. 7.—Standard Oil Co. appears to have discovered an oil field in Kern County about midway between Rio Bravo and Rosedale and approximately 7 miles due north of the Ten Section field discovered by Shell Oil Co. earlier this year. Standard Oil Co.'s wildcat, which has cored 35 feet of saturated oil sand, is No. 11-1 K.C.L. in section 19-29-26, and the bit was still in the pay when drilling operations were concluded at 7,842 feet. The 35 feet of oil sand was cored at 7,807-42 feet and preparations have already been started to run in and cement a string of 9⅝-inch casing preliminary to an early production test. It is quite probable that the company will make a little more hole after the water string has been landed, although no definite plan has yet been formulated as the 35 feet of oil sand penetrated appears to have a lot of kick and would justify a production test without the addition of any more hole.

It may have discovered a new productive trend along a probable shear zone extending southeastward from the Semi-Tropic gas field to Arvin in the extreme southern end of the San Joaquin Valley, a distance of approximately 45 miles. Heretofore, it has been considered that the Ten Section field discovered by Shell Oil Co. was located along this probable line of shearing extending southeastward from the Semi-Tropic gas field, but Standard's discovery due north of Ten Section field, tends to indicate the possibility of a second parallel shear zone extending southeast from the Buttonwillow gas field. In order to clarify the location of these two possible lines of parallel shearing it would not be amiss to say that the Semi-Tropic gas field is located 6 miles north of the Buttonwillow gas field. This is approximately the same as the distance between the Ten Section field and Standard's discovery at Rio Bravo. It is quite obvious, therefore, that the Ten Section field and the probable new productive area at Rio Bravo cannot possibly be located along the same line of shearing, which in most cases is from northwest to southeast.

The possibility of parallel lines of shearing extending southeast from Buttonwillow gas field and Semi-Tropic gas field is of paramount importance because of the probability that additional productive fields may ultimately be discovered along these major trends. It is interesting to note in this connection that all fields in California, with few exceptions, have been discovered along well defined trends reflecting the existence of major shear zones or the trapping of oil and gas along either a single or multiple line of dominating faults.

Leasing activities in the Rio Bravo district have been quite brisk during the past week but in as much as the Standard's wildcat is located in the center of a large block, there is very little acreage available in close proximity to the well. It is interesting to note that Standard Oil Co. picked up the top of the pay in its Rio Bravo wildcat at approximately the same depth at which the Shell Oil Co. logged the top of the pay in its discovery well in the Ten Section field.

Coring of a highly saturated oil sand in Standard Oil Co. No. 11-1 K.C.L. in the Rio Bravo district has focused the attention of operators on two other wells now being drilled in that general area. Approximately 6 miles southeast of Standard Oil Co.'s Rio Bravo wildcat, Superior Oil Co. and Union Oil Co. are jointly drilling a test in section 11-30-26. This wildcat, along the Standard-Rio Bravo trend is not yet deep enough as the bit a few days ago was rotating ahead at 7,500 feet. Associated Oil Co. is drilling a wildcat 7 miles southwest of Standard Oil Co.'s Rio Bravo test and about 8 miles northwest of Shell's discovery well in the Ten Section field. The company recently stuck drill pipe while rotating ahead at 7,683 feet but a successful recovery has been effected and the crew is at the present time cleaning out and reconditioning the hole for an immediate resumption of drilling. This wildcat is nearing the depth at which the anticipated pay is expected to be encountered and consequently the hole will probably be cored solid from now on. In the Ten Section field of Kern County, Shell is making normal footage in No. 34 K.C.L. and barring the development of unforeseen difficulty should have it ready for a production test before the close of January. Standard Oil Co. cored approximately 3 feet of oil sand in No. 9-1 K.C.L., an outpost in the Ten Section field of Kern County, at 8,168 feet and then immediately passed out into a hard gray sand. This well, located in section 34-30-26, about 3 miles southeast of Shell's discovery well in the Ten Section field, is showing every evidence of being an edge well as the productive formation found by Shell has apparently pinched out before it reaches section 34-20-26. Standard No. 9-1 K.C.L. is running substantially deeper structurally than either of the two wells finished in the Ten Section field by Shell Oil Co. up to the present time. Standard No. 10-1 K.C.L., 1 mile north of Shell's discovery well, has taken on a very doubtful aspect at 8,700 feet as this is approximately 1,000 feet deeper than the top of the pay within the proven limits of the Ten Section field. Ohio Oil Co. has abandoned as dry its No. 1-E K.C.L. at 8,852 feet.

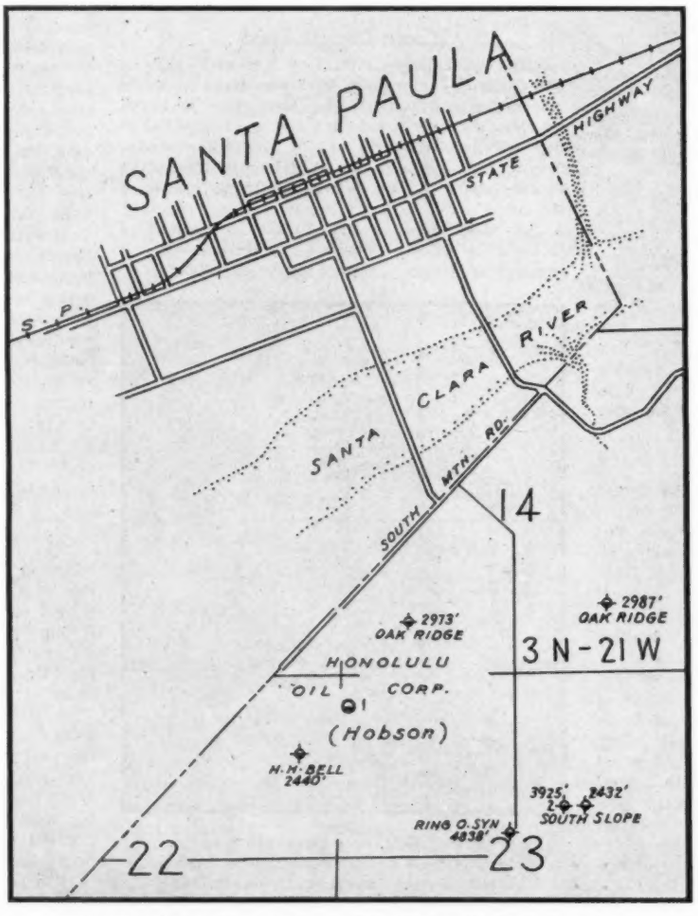
Shell Oil Co. extended the proven limits of the prolific Ventura Ave-

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Diesel and gas oil	.....	.....	79,885	11,412	231,426	639,389
Gasoline	118,244	16,892	.....	.....	5,493,496	6,788,266
Kerosene	.....	.....	.....	.....	1,128,379	830,445
Foreign exports:						
Crude oil	94,370	13,481	168,545	24,078	8,448,233	11,679,995
Fuel oil	155,180	22,169	119,005	17,001	9,483,595	11,110,861
Diesel and gas oil	163,136	23,305	43,997	6,285	5,208,133	4,156,472
Gasoline	397,745	56,821	256,205	36,601	7,329,168	6,283,771
Kerosene	50,629	7,233	6,487	927	1,403,998	1,137,169
Other unfinished oil	.....	.....	58,959	8,423	214,212	120,024
Coastwise-domestic:						
Crude oil	269,093	38,442	207,918	29,703	6,766,211	6,331,081
Fuel oil	306,458	43,780	207,608	29,658	9,847,395	8,513,228
Diesel and gas oil	.....	.....	5,549	793	1,042,642	1,070,832
Gasoline	268,590	38,370	286,497	40,928	11,474,810	10,378,960
Kerosene	.....	.....	.....	.....	159,088	166,209

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	76,131	10,876	218,603	158,152
Gasoline	.....	.....	.....	.....	285,959	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	327,418	484,597
Lubricants	4,017	574	.....	.....	47,560	60,320
Foreign exports:						
Crude oil	.....	.....	119,697	17,100	2,978,568	2,376,008
Fuel oil	.....	.....	49,196	7,028	2,354,929	2,096,135
Diesel and gas oil	.....	.....	122,478	17,497	1,849,928	915,307
Gasoline	.....	.....	233,587	33,370	3,618,595	2,563,189
Kerosene	.....	.....	36,520	5,217	607,543	635,201
Lubricants	.....	.....	39,227	5,604	362,367	173,507
Other unfinished oil	.....	.....	.....	.....	90,923	.....
Coastwise-domestic:						
Fuel oil	100,214	14,316	35,108	5,015	5,923,638	6,234,592
Diesel and gas oil	.....	.....	.....	.....	615,988	215,294
Gasoline	178,196	25,457	273,517	39,074	4,963,937	3,973,369
Kerosene	.....	.....	.....	.....	203,744	94,005



Honolulu Oil Corp. is drilling a deep test on the Hobson ranch in Ventura County in an attempt to open up an extension of the South Mountain field

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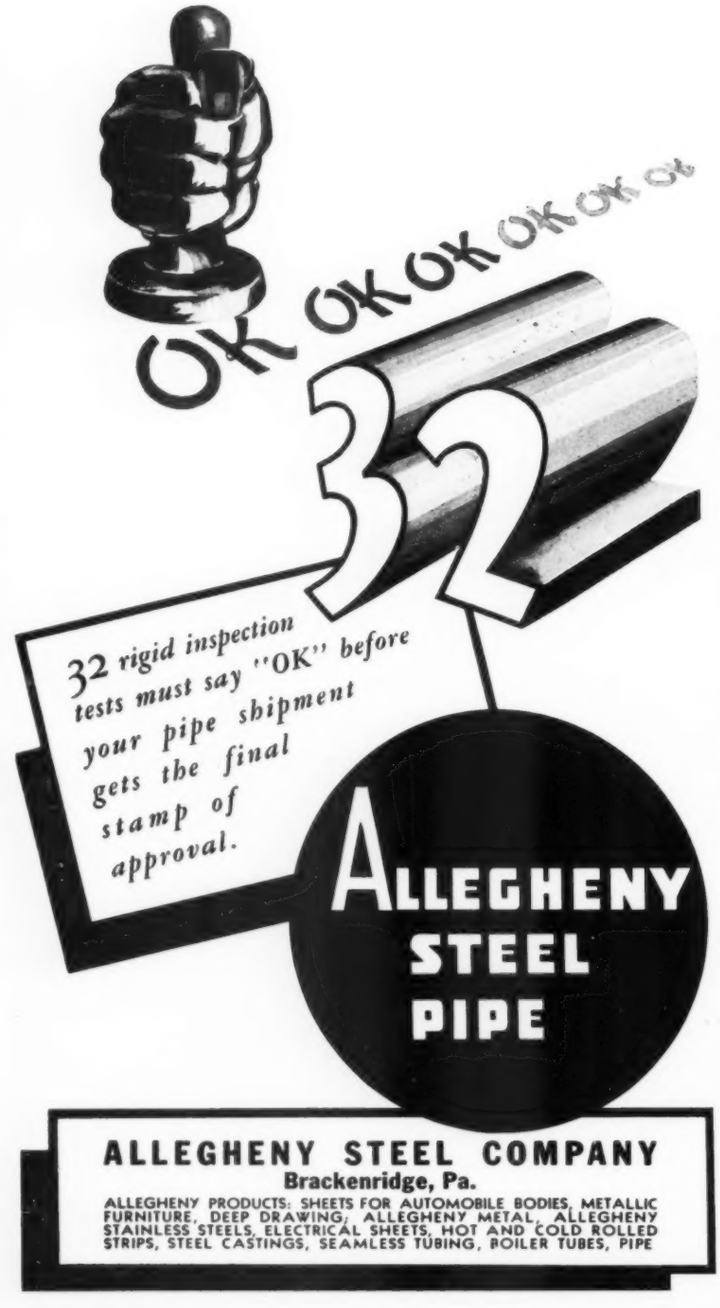
nue field approximately 1,000 feet northwest by completing No. 88 Taylor flowing 1,140 bbls. of clean 31.2 gravity oil and 850,000 feet of natural gas per day from 7,600 feet. This completion broadens the nose in the extreme western end of the Ventura Avenue field and thereby tends to confirm the possibility that Continental No. 5 Grubb in the extreme eastern end of the San Miguelito field is in reality an outpost in the western end of the Ventura Avenue field. No. 5 Grubb is approximately 6,000 feet west of Shell No. 88 Taylor in the western end of the Ventura Avenue field and about the same distance southeast of Nos. 1, 2, 3 and 4 on the Grubb lease of Continental Oil Co. This area is one of the most interesting sections of the state under development at the present time as the limits of production are undefined and three fields, Ventura Avenue, San Miguelito and Padre Canyon, are so close together that it is impossible to determine with any degree of accuracy whether future drilling will reveal the existence of one or more fields. General Petroleum Corp. has recompleted No. 13 Notten in the deep 57 zone at Ventura Avenue but the result was somewhat unsatisfactory as current production is cutting approximately 41 per cent. This well was returned to production a day or two ago flowing 1,248 bbls. of net 28.8 gravity oil and 600,000 feet of natural gas per day after the hole had been redrilled to 9,480 feet and finished with a 4½-inch liner including 437 feet of perforated.

The new wells were completed in the Capitan field of Santa Barbara County during the current week and both registered commercial production from the Vaqueros formation. Shell Oil Co. No. 1-16 Covarrubias was brought in flowing 1,050 bbls. of exceptionally clean 21.9 gravity oil and 75,000 feet of natural gas per day. It was carried down to 2,487 feet, then plugged back to 1,314 feet and the 8⅝-inch landed at 2,287 feet was perforated at 1,170-1,205 feet. General Petroleum Corp. No. 21 Erburu, although it registered a smaller initial production, was nevertheless a satisfactory completion, pumping 233 bbls. of exceptionally clean 21.9 gravity oil. It was bottomed at 1,740 feet and finished with an 8⅝-inch water string at 1,677 feet and 116 feet of 6⅝-inch liner carrying 66 feet of perforated. Associated Oil Co., which is drilling an outpost on the Edwards lease in section 2-4-30, has not yet logged any encouraging indications, although the bit in this hole is nearing the 2,150-foot level.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North Belridge

The Belridge Oil Co. in the North Belridge field of Kern County completed No. 5-1 in section 1-28-20, flowing 2,928 bbls. of clean 29.5 gravity oil and 2,600,000 feet of natural gas per day from 8,465 feet. Belridge Oil Co. is drilling three other wells in the North Belridge field at the present time and has staked location for another, No. 21-1, which will be drilled 1,637 feet south and 2,329 feet east from NW cor. section 1-28-20. Associated Oil Co. No. 5 Reward failed to show commercial production on a preliminary test a week or so ago and the company accordingly resumed drilling. The bit at the present time is in a hard gray sand at 8,825 feet. Union Oil Co. successfully recovered the 5¾-inch liner in No. 20 Belridge and after cleaning out the hole drilled ahead to 8,510 feet. It is the present intention to permit the well to produce from this depth for an indefinite period if the additional footage made is adequately reflected in increased potential. Continental Oil Co., which has made an excellent record in its drilling and production activities in the North Belridge field, will begin drilling a new well on its Result lease early in the new year. Continental's last several completions on this property have all registered substantial production.

Midway-Sunset

In the Midway-Sunset field of Kern County, Union Oil Co. completed an excellent new well when No. 2 Williams was brought in pumping 491 bbls. of 17.2 gravity oil per day from an even 2,000 feet after the hole had been finished with a 6⅝-inch liner including 429 feet of perforated. The output of this new well was still cutting about 16 per cent at last reports and some doubt exists as to whether production will clean up. Chanslor Canfield Midway Oil Co.'s well No. 21 in section 21-32-23, brought in pumping 426 bbls. of 16.8 gravity oil per day is also showing a substantial water cut and has not shown any indications of cleaning up. This well was completed at 2,379 feet and finished with a 10¾-inch water string landed at 1,960 feet and a 6⅝-inch liner including 456 feet of perforated. Both new wells had a penetration in the oil zone of more than 400 feet and should be long lived. This large penetration is responsible for the substantial production secured as it will be remembered that the Midway-Sunset field is one of the oldest producing areas in the state. Standard Oil Co. completed No. 21-15-D in section 15-32-23, after redrilling and deepening the hole from 3,340 feet to 3,610 feet and returned it to production flowing 351 bbls. of 25.6 gravity oil and 353,000 feet of natural gas per day. Associated Oil Co. No. 7 Midway in the Midway-Sunset field proved good for only 60 bbls. of 16.2 gravity oil per day upon completion at 1,235 feet and in addition to the small production secured the well is showing a water cut of 30 per cent. No. 2-2 of the Five Points Oil Co. in this field was completed pumping 35 bbls. of relatively clean 15.1 gravity oil per day from 1,090 feet.

Torrance

Completion of the Dearborn Oil Co. No. 1 Flint in the Torrance-Redondo field of Los Angeles Basin has greatly stimulated leasing activities and will result in the drilling of several new wells in the immediate future. New work has already been projected on the Cotton, Cathers, Flint and other adjoining leases by Fullerton Oil Co., C. B. Cathers, Macmillan Petroleum Co. and Signal Oil Co. of California. Dearborn Oil Co.'s new well was brought in flowing 390 bbls. of 26.8 gravity oil and 340,000 feet of natural gas per day from 4,556 feet. This is an old well of the Standard Oil Co. which has been drilled to 3,730 feet and abandoned several years ago. Dearborn took over the old hole and after carrying it down to 4,556 feet landed a string of 4¾-inch on bottom and cemented through perforations at 4,300 feet. This string of 4¾-inch carried 256 feet of perforations indicating that approximately that amount of productive oil sand had been encountered. The gas from this well contains 3¼ gallons of gasoline to each 1,000 feet of gas treated. Chanslor Canfield Midway Oil Co. No. 8 Del Amo which failed to encounter a deep zone at 3,906 feet and was accordingly plugged back to 3,635 feet was only good for 37 bbls. of 17.3 gravity oil per day upon being recompleted. The 8⅝-inch casing cemented through perforations at 3,770 feet was perforated at 3,125-3,385 feet, 3,395-3,577 feet and at 3,592-3,612 feet. Superior Oil Co.'s engineers should have something for the books when the company concludes drilling operations on No. 1 Inglewod Extension, an outpost in the Playa Del Rey field of Los Angeles Basin, as the bit in this hole has already passed the 9,000-foot level. This is surprising, as other wells not more than 1 mile away hit the schist at approximately 7,500 feet. Sharby Oil Co. should soon be in a position to make a production test of No. 1 Michel a direct offset to the Eastern Oil Co.'s Del Rey outpost that showed indications of resulting in commercial production as the bit is within 100 feet of where the top of the oil showings were logged in the Eastern's test.

In the Santa Fe Springs field Union Oil Co. has finished two new wells on the Alexander lease although neither registered large production. No. 34 Alexander bottomed at 4,490 feet but plugged back to 4,371 feet was completed pumping 50 bbls. of 32.4 gravity oil per day. No. 36 Alexander was finished pumping 135 bbls. of 32.5 gravity oil per day upon completion at 4,050 feet after the hole had been plugged back from 4,095 feet because of bottom water. The output of both wells is showing a high water cut due to depletion of the productive zone and edgewater intrusion. In the Montebello field of Los Angeles Basin St. Helens Petroleum Co. completed two small wells both of which registered a high water cut. No. 22 Monterey was brought in pumping 140 bbls. of 23.1 gravity oil per day from 3,758 feet and No. 23 Monterey was finished pumping 51 bbls. of 23.2 gravity oil daily from

(Continued on Page 90)

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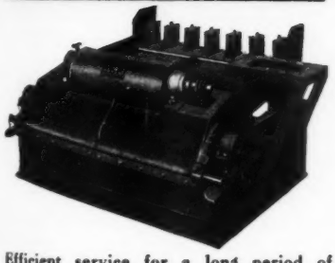

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A rig is being moved into Aransas County by Cron and Gracey for a very interesting wildcat to be drilled for Barnsdall Oil Co. on the K. J. Edwards lease, about 9 miles northeast of the town of Rockport in the William Lewis Survey. Two strings of tools are being moved from the St. Martinsville and Amelia fields where dry holes were put down for the Continental Oil Co. and Texas Co.

Edwards Drilling Co. is completing No. 4 Maco Stewart in the Dickinson field and is preparing to move the rig to No. 3 Stewart which will be drilled for the Kenben Oil Co.

Nichlos Drilling Co. is completing No. 2-B Young at a depth of 8,318 feet for the Continental Oil Co. and will move over for the same company's No. 2 Oseman Young.

W. H. Harrison who drilled the discovery well of the Magnet field for Texas-Crusader Oil Co. is preparing to core deeper after the well began to show salt water. Companies holding protection acreage around this well have hesitated in starting any work due to the unfavorable actions of the discovery well. It is reported that the wildcat location made several weeks ago by C. B. Bunte on the J. A. Fite lease, Sandy Point Prospect, Brazoria County, will be an active one next week.

George Echols assured himself of some additional work in the Quintana-O'Connor field when he opened a mile and a quarter west extension by the completion of Josey and Bruton's No. 1 Lambert. This field has become one of the largest fields in the Lower Gulf Coast and has been developed by the Quintana Petroleum Co.

Loffland Bros. have moved in two rigs to Matagorda County for the Continental Oil Co. which are located on the Shepherds Mott and Citrus Grove Prospects.

Rutherford Drilling Co. has three wells on the sand in the Van Vleck field for the Skelly Oil Co. and production tests are scheduled to be made during the week. No. 11-B Cobb is coring oil sand in the 8,200-foot horizon, while No. 12 and 13-B Cobb will be completed in the 7,400-foot sand.

The following is a summary of operations by the various contractors at the close of the week:

Contractor and location—	No. rigs	Company	Status
Nicklos Drlg. Co.:			
Tepetate	2	Continental Oil Co.	Drilling
Lafourche Parish	1	Pan American Prod. Co.	Drilling
Rutherford Drlg. Co.:			
Van Vleck	3	Skelly Oil Co.	Completing
L. W. Capps:			
Rabbs Ridge	1	L. W. Capps	Drilling
Cron & Gracey:			
Aransas County	1	Barnsdall Oil Co.	Rigging up
Roanoke	1	Shell Petroleum Corp.	Drilling
Iowa	1	Shell Petroleum Corp.	Drilling
Manvel	1	Texas Co.	Drilling
Galveston County	1	Shell Petroleum Corp.	Testing
Flour Bluff	1	Humble Oil & Ref. Co.	Drilling
South Houston	1	Stanolind Oil & Gas Co.	Drilling
Edwards Drlg. Co.:			
Dickinson	1	Kenben Oil Co.	Rigging up
Fort Bend County (wild)	1	Sam Harrison	Rigging up
Hidalgo County	1	McCollum Exploration Co.	Drilling
Ben (Bud) Coyle:			
Charenton	1	Mike Hogg and others	Workover
Jeanerette	2	Herton Oil Co.	Drilling
H. J. DeArman:			
Bosco	1	Standard of Kansas	Workover
George Echols:			
Placedo	1	Commonwealth Oil Co.	Drilling
Live Oak County	1	Sun Oil Co.	Drilling
Gillis	1	Fohs Oil Co.	Drilling
Quintana-O'Connor	1	Josey and Bruton	Testing
Loffland Bros.:			
Tepetate	2	Continental Oil Co.	Drilling
Vermilion Parish	1	Continental Oil Co.	Drilling
Rowan Drlg. Co.:			
East Baton Rouge	1	La. Crusader Oil Co.	Drilling
Plaquemines Parish	1	Tide Water Oil Co.	Drilling
Refugio County	1	Tide Water Oil Co.	Drilling
Smith & McDannald:			
South Houston	2	Stanolind Oil & Gas Co.	Drilling
Louise	1	Pure Oil Co.	Drilling
Conroe	1	Smith & McDannald	Drilling
Bosco	1	Superior Oil Prod. Co.	Drilling
Sorrento	1	Pan American Prod. Co.	Drilling
Dickinson	1	Pan American Prod. Co.	Drilling
Liberty County	1	Mayo	Drilling
East Hackberry	1	Superior Oil Prod. Co.	Drilling
Jennings	1	Shell Petroleum Corp.	Drilling
St. Martin Parish	1	Shell Petroleum Corp.	Drilling

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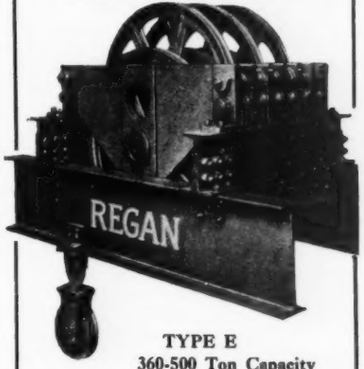

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Oklahoma Operations

By
DAL DALRYMPLE

MOORE EXTENSION WELL IS RATED 30,000 BBLS. PER DAY

The Moore pool of Cleveland County continued to be a center of interest in Oklahoma oil circles with its large oil wells, but the Crescent field of Logan County, where big wells have become common in recent months, was on the verge of making another bid for recognition with a prospective gusher.

The big well of the week in Oklahoma was the Carter Oil Co. No. 1 Walker, SW NE SW section 27-10-2w, one-fourth mile southeast of production in the Moore field. It flowed 5,281 bbls. of oil in 4 hours to give it a potential rating of 30,024 bbls. Gas gauged about 43,000,000 feet a day. Production was from second Wilcox sand at 7,295-7,302 feet, total depth. Three other wells in the Moore area were near the completion stage. Extension of the pool one location west at the north end was forecast as Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 State, SE SE SW section 16-10-2w, topped Wilcox sand at 7,242 feet and cored saturated sand below 7,255 feet. This well is one location west of the Anderson-Prichard Oil Corp.'s big gas well at the north end of the pool.

In the Crescent field, Carter Oil Co. and Gulf Oil Corp. No. 3 Miller, SE NW SE section 28-17-4w, was drilling in sand below 6,175 feet and checking high structurally. Top of Viola lime was 5,885 feet; first Wilcox sand, 6,051 feet. It is due as the next completion at Crescent, where several other wells are nearing the rich pay.

A Noble County wildcat was looking favorable at the weekend. It was Shell Petroleum Corp. and others No. 1 Moelling, C SW NW section 31-21-2w, north of Lucien. It had saturated sand at 5,384-89 feet, and was running casing.

Tillman Wildcat

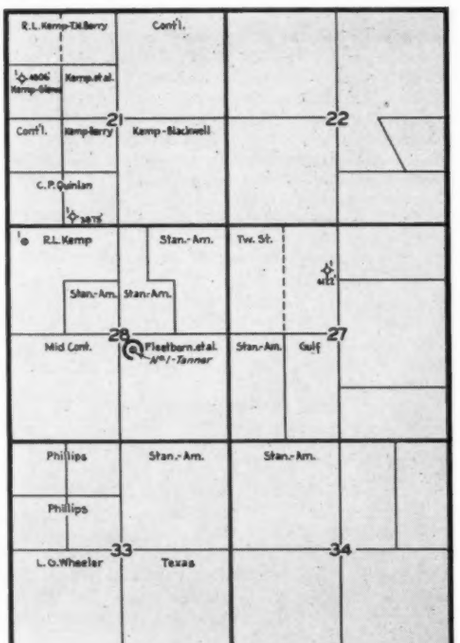
Operators still were working with the Tillman County wildcat that was hailed as an oil pool opener one day recently, and then the next day had a hole full of water. It was the Indian Territory Illuminating Oil Co. and others No. 1 Hatler, C SW NE section 32-2s-17w, south of Frederick. The well cleaned itself in several head flows of oil, mud and water one day last week, but the following morning the hole was filled with water and only a small amount of oil. Total depth was 3,816 feet. It was plugged back to 3,808 feet and was due to test again about midweek. The first plug did not hold. Oil was from a sand, probably of Pennsylvanian formation, at 3,800-11 feet.

One Lincoln County wildcat was completed as a large gas well to open a new pool, and work was starting at another well nearby. Another Lincoln wildcat which has had showings of oil and gas, the Fleetborn Oil Corp. No. 1 Tanner, section 28-17-5, had second Wilcox sand at 3,953-4,001 feet, total depth, plugged back to shut off water and was due for an early test.

Oklahoma completions of the week included a small producer that opened a new area northwest of Holdenville; seven oil wells in the Fitts field, Pontotoc County; four wells in the Senora sand district of southwestern Okfuskee County, and three wells at Oklahoma City.

Pontotoc County

Seven oil wells were completed in the Fitts field, Pontotoc County. E. H. Moore and associates accounted for four of these. Their No. 5 Moody, SE NE SE section 22-2-7, topped Viola lime at 4,103 feet; Bromide, 4,370 feet; total depth, 4,375 feet. Acidized with 10,000 gallons, it flowed 203 bbls. of oil gross in 1 hour and 15 minutes through casing, and made potential of 399 bbls. The No. 1-A Craddock, NW NW SW section 29-2-7, was acidized with 6,000 gallons and flowed 230 bbls. of oil gross through tubing. It topped Hunton lime at 3,268 feet; Sylvan shale, 3,590 feet; total depth, 3,595 feet. The No. 15 Schauers, NW NE NW section 29-2-7, topped Viola lime at 3,970 feet; Bromide, 4,245 feet; total depth, 4,350 feet, where it had a hole full of water; plugged back to 4,270 feet and acidized with 6,000 gallons. It flowed 441 bbls. through casing in 1 hour and 15 minutes and made potential of 1,953 bbls. Same operator's No. 4-A G. Smith, NE NE NW section 31-2-7, flowed 1,100 bbls. in 4 hours while running tubing and made potential of 2,872 bbls. Production was from Wilcox sand topped at 4,445 feet; total depth, 4,455 feet.



Fleetborn Oil Corp. No. 1 Tanner, wildcat in section 28-17-5, northern Lincoln County, had shows of oil and gas, but was plugging back to test after encountering water at 4,001 feet.—(Mid-Continent Map Co., Tulsa)

Simpson-Fell Oil Co. No. 4-A Westheimer, NE SE NE section 27-2-7, topped Hunton lime at 3,320 feet; Sylvan shale, 3,645 feet; total depth, 3,648 feet. It flowed 262 bbls. of oil in 1 hour through tubing.

Amerada Petroleum Corp. No. 3 Woolley, NE SE SE section 21-2-7, made potential of 2,713 bbls., after flowing 480 bbls. gross in 1 hour through casing. It was acidized with 10,000 gallons. Production was from Viola lime, topped at 3,998 feet, and Bromide, 4,255 feet; total depth, 4,374 feet.

Magnolia Petroleum Co. No. 7 D. Harden, SW NW NE section 30-2-7, was acidized with 5,000 gallons, flowed 478 bbls. through casing and tubing in 2 hours and was completed at 3,820 feet, total depth. Top of Hunton lime was 3,509 feet; Sylvan shale, 3,816 feet.

H. L. Blackstock No. 3 Lewis, SW SE SE section 19-2-7, was temporarily abandoned.

Mid-Continent Petroleum Corp. No. 1 Statler, SE SE SW section 2-1-7, Jesse area, flowed 368 bbls. of oil in 24 hours from McLish formation, topped at 4,575 feet; total depth, 4,655 feet, completed. After acidizing with 6,000 gallons, it flowed 400 bbls. gross in 8 hours and made potential of 647 bbls.

Estimated Daily Production

Estimated daily average production of Oklahoma for the week ending December 5, and for the preceding week, was as follows:

	Barrels	
	Dec. 5	Nov. 28
Allen	7,600	8,000
Burbank	8,150	8,000
South Burbank	15,250	15,125
Balance Osage	21,100	21,150
Blackwell district	5,200	5,225
Bristow-Slick	8,125	8,050
Chandler	3,700	3,800
Crescent	9,050	9,050
Cromwell	3,475	3,300
Cushing-Shamrock	10,750	10,300
Duncan district	3,950	3,975
Edmond	9,375	11,375
Fish	7,100	7,350
Fitts	60,600	63,875
Gray	1,475	1,400
Graham	5,125	5,100
Healdton	9,875	9,850
Hewitt	4,625	4,600
Holdenville	975	1,000
Keokuk	6,725	8,650
Konawa	1,600	1,775
Lucien	12,350	12,500
Marshall-Lovell	700	675
Oklahoma City	113,575	143,475
Olympic	11,975	11,225
Papoose	950	975
Polo	2,425	2,250
Sasakwa and townsite	2,625	3,250
Sholem-Alechem	3,275	3,350
Seminole:		
Bowlegs	11,875	11,750
Carr City	6,150	5,925
Earlsboro	6,225	6,425
South Earlsboro	775	750
East Earlsboro	8,950	8,850
Little River	11,925	12,050
East Little River	1,100	1,125
Maud	800	825
Mission	2,150	2,375
Seminole	9,650	9,825
East Seminole	4,200	4,225
Searight	5,050	5,400
Total Seminole	68,850	69,525
St. Louis-Pearson	22,400	23,325
Tatums	3,650	3,600
Tonkawa-Garber-Thomas	5,575	5,625
Wewoka	3,825	3,950
Yale-Jennings	4,000	4,025
Other pools	69,100	69,425
Total Oklahoma	529,100	568,125

Other Wells

H.&M. Drilling Co. No. 5 Busby, NE SW SE section 20-5-8, failed to find Allen sand and was dry and abandoned at 959 feet, total depth.

Benedum & Trees No. 2 Burke, NW SW SW section 28-5-5, an old well, was deepened from 2,340 feet to 2,675 feet, where water intruded, and plugged back to 2,658 feet to recomplete. It pumped 5 bbls. of oil and 1 bbl. of water in 24 hours. Top of Viola lime was 2,476 feet.

New work in Pontotoc County: Akin Oil Co. No. 3 Daniels, SE NE SW section 21-2-7, location; Amerada Petroleum Corp. No. 4 Woolley, NE SE SE section 21-2-7, rigging up rotary; Sinclair Prairie Oil Co. No. 12 Woolley, NE SW SW section 22-2-7, digging cellar; H. L. Blackstock No. 5-A Moody, NE SW SW section 23-2-7, cellar; Carter Oil Co. No. 11 G. Smith, NW NE SW section 28-2-7, digging cellar; E. H. Moore and others No. 2-A Craddock, SW NW SW section 29-2-7, cellar; Hager & Sledge No. 1-A Haggard, NW NE NW section 4-4-5, drilling at 1,305 feet.

E. H. Moore and associates staked location for No. 1 Muse, SW NE SE section 33-2-7, wildcat south of the Fitts field.

Akin Oil Co. No. 2 Daniels, SE NE SW section 21-2-7, total depth 4,317 feet, was acidized with

15,000 gallons, flowed 520 bbls. of oil gross in 2 hours and was taking potential. Blackstock No. 1-A Kirby, SW NE SE section 22-2-7, total depth 3,982 feet, flowed 646 bbls. of oil in 4 hours and was shut in. E. H. Moore and others No. 1 Burris, SE NW SE section 22-2-7, was acidized with 8,000 gallons at 4,164-4,426 feet and flowed 317 bbls. gross in 5 hours. Sinclair Prairie Oil Co. No. 7 Woolley "A," NE SW SW section 22-2-7, was bottomed at 4,376 feet. After acidizing with 14,000 gallons, it flowed 85 bbls. of oil in 1 hour through tubing and 635 bbls. the next hour through casing and was shut in.

Coal County

W. A. Delaney & Choctaw Oil Co. No. 1 Sawyer, SW SE NW section 7-1n-8, which extended the Jesse pool into Coal County, made potential of 236 bbls. of oil and was temporarily completed at 4,524 feet. It topped Viola lime at 4,062 feet: Bromide, 4,330 feet, and was acidized with 10,000 gallons.

Same operator's No. 1-A Choctaw, SW SE NW section 7-1n-8, a twin well, set 7-inch casing at 2,125 feet and was waiting on cement at 2,152 feet, total depth. It had oil showing in lime cores at 2,138-50 feet.

Osage County

Carter Oil Co. and others No. 8 Kennedy, NW NW SE section 34-26-6, South Burbank area, Osage County, flowed and swabbed 328 bbls. of oil in 27 hours and was completed at 2,910 feet, total depth. Top of Bartlesville sand was 2,830 feet.

Magnolia Petroleum Co. and Empire Oil & Refining Co. No. 3 Bonto, SE SE NW section 23-26-6, had sand at 2,876-2,946 feet; total depth, 2,949 feet. It was producing at the rate of 50 bbls. of oil an hour, with 1,500,000 feet of gas an hour when the rig burned and it was shut in. After repairs, it flowed 750 bbls. in 24 hours through casing and 274 bbls. in 24 hours through tubing, completed.

Lewis Production Co. No. 9 Callahan, NE NW SW section 23-26-6, topped Bartlesville sand at 2,899 feet; total depth, 2,985 feet; plugged back to 2,975 feet, was shot with 150 quarts and swabbed 71 bbls. in 24 hours, completed.

Phillips Petroleum Co. No. 2 Lookout, NE SE NW section 9-24-7, Naval Reserve area, topped Bartlesville sand at 2,653 feet; total depth, 2,701 feet in sand; was shot with 80 quarts and swabbed 80 bbls. in 24 hours. Lewis Production Co. and Texas Co. No. 9 Kenny, SE NE SW section 9-24-7, had Bartlesville sand at 2,640-90 feet, total depth, swabbed 14 bbls. of oil in 24 hours, with a showing of water, and was completed.

Link Oil Co. No. 8 Osage, SW NE NW section 4-22-12, topped Bartlesville sand at 1,410 feet; Burgess sand, 1,650 feet; total depth, 1,666 feet in sand. It swabbed 50 bbls. of oil naturally; was shot and pumped 125 bbls. in 24 hours.

Opal Twyman No. 2 Osage, SW SE NW section 4-23-11, had sand at 1,543-65 feet, total depth, and produced 2,500,000 feet of gas, completed.

Elm Oil Co. No. 6 Osage, C W half E half NW section 17-20-12, had a showing of oil in Bartlesville sand at 1,440-49 feet, but was dry and abandoned at 1,482 feet, total depth.

Indian Territory Illuminating Oil Co. No. 444 Osage, NE SW SE section 6-24-8, was a location. Link Oil Co. and others No. 9 Osage, SW NW NE section 4-22-12, an old well, was being cleaned out to deepen.

Okfuskee County

Four wells were completed in the Senora sand district of southwestern Okfuskee County, with one new producer elsewhere in the county. Blackwell Oil & Gas Co. No. 11 Dalton, SE NW NE section 36-10-8, topped Senora sand at 1,710 feet; was bottomed at 1,739 feet; shot with 30 quarts and flowed 170 bbls. of oil in 24 hours through tubing. Manahan Oil Co. No. 2 Black, SW NE SE section 25-10-8, flowed 721 bbls. in 24 hours through tubing after a 60-quart shot. It had Senora sand at 1,743-76 feet; total depth, 1,780 feet. Chapman & McFarlin No. 1 Bunner, SE NW SE section 25-10-8, topped sand at 1,739 feet; total depth, 1,773 feet; was shot with 80 quarts and flowed 150 bbls. in 5 hours. Sinclair Prairie Oil Co. No. 6 Carolina, SW NE SW section 31-10-9, swabbed 143 bbls. in 24 hours from Senora sand at 1,757 feet; total depth, 1,774 feet.

Commercial Co. No. 1-A Comey, NW NE NE

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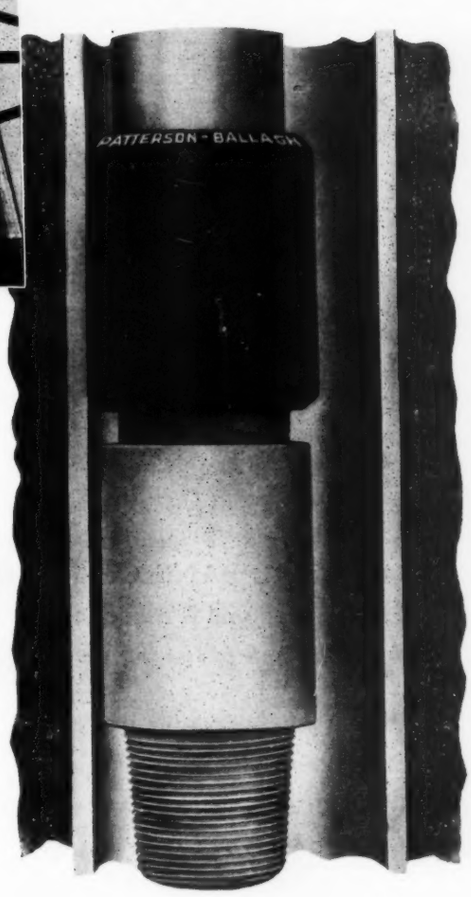

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section 26-12-11, topped Wilcox sand at 3,552 feet: was bottomed at 3,580 feet in hard sand, and flowed 150 bbls. of oil in 24 hours, completed.

Eagle Picher Lead & Zinc Co. No. 2 Gregory, NE NW NE section 36-10-11, an old well, was deepened from 2,643 feet to 3,103 feet and recompleted. It pumped 8 bbls. of oil in 24 hours.

The following new operations in Okfuskee County were reported: J. A. Hincke and W. A. Delaney No. 1 School Land, NE cor. section 18-10-9, cellar and pits; W. B. Pine No. 1 Hotulkoce, NW NW NE section 28-10-11, rig on ground; Mid-Continent Petroleum Corp. No. 1 Replogle, SW NE SE section 24-12-8, building rig; Commercial No. 2-A Comey, NW NW NE NE section 26-12-11, cellar.

Hughes County

Olympic Oil Co. No. 1-A Dunn, SE NW SE section 11-7-8, wildcat, opened a new producing area northwest of Holdenville, Hughes County. It topped Senora sand at 1,825 feet; total depth, 1,842 feet. It flowed 35 bbls. of oil in 24 hours, and was completed as a 20-bbl. pumper.

Vulcan Oil Co. No. 1 Hall, NE SW section 4-8-10, topped Cromwell sand at 3,055 feet; was bottomed at 3,202 feet; produced 2,800,000 feet of gas and was completed. Texas Co. No. 1 R. Meaders, C SW NW section 4-8-10, had Cromwell sand at 3,049-69 feet; total depth, 3,175 feet; plugged back to 3,071 feet, produced 2,200,000 feet of gas and was completed.

Oklahoma County

Three wells were completed in the Oklahoma City field, Oklahoma County. Sunray Oil Co. and Phillips Petroleum Co. No. 3 Harn, NE SE NW section 27-12-3w, on the Harn tract south of the state capitol, topped second Wilcox sand at 6,394 feet; total depth, 6,455 feet. It made potential of 10,113 bbls. of oil, with 18,783,000 feet of gas.

Knox Garvin No. 1 Dallas Gray, NE SE SE section 27-12-3w, made potential of 2,574 bbls. of oil from Wilcox sand topped at 6,315 feet, and was completed at 6,455 feet, total depth.

Black Gold Petroleum Co. No. 1 Hayes, SW SE SE section 27-12-3w, topped Wilcox sand at 6,285 feet and was bottomed at 6,449 feet. It flowed 60 bbls. of oil in 1 hour and made potential of 1,443 bbls.

Seminole County

Five completions in Seminole County included three oil wells and two failures. W. A. Delaney No. 1-A Reed, SE SW SW section 12-5-7, topped Misener sand at 3,964 feet; Hunton lime, 4,002 feet; Sylvan shale, 4,022 feet; total depth, 4,024 feet. It was shot with 60 quarts and swabbed and flowed 420 bbls. in 24 hours.

Deep Rock Oil Corp. No. 7 Hagler, NW NW NE section 19-9-7, flowed 115 bbls. of oil in 24 hours and was completed at 3,444 feet, total depth. Sand was topped at 3,437 feet.

Rogers Oil & Gas Co. No. 1 Stubbs, NW NW SW section 16-9-7, topped Cromwell sand at 3,457 feet, was bottomed at 3,460 feet, and flowed 470 bbls. of oil in 48 hours.

Fleetborn Oil Corp. No. 2 Patton, SW NW SW section 18-6-8, was dry and abandoned at 2,921 feet, total depth. It was plugged back to 2,841 feet and shot but failed to produce. George Burris and others No. 1-A Jeffries, NW SW SW section 32-8-7, was dry and abandoned at 3,320 feet, total depth.

L. W. Prunty No. 5 Boring, NW NW SE section 17-9-7, the only new operation in Seminole County, was rigging up rotary.

Lincoln County

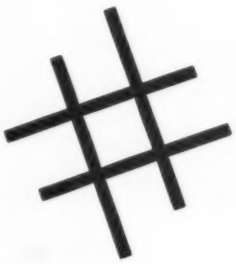
Skelly Oil Co. No. 1 Sporn, NW NE SW section 21-17-3, pool opener in northern Lincoln County, produced 83,300,000 feet of gas and was completed after plugging back from 4,651 feet, total depth, to 4,588 feet. Production was from Simpson dense, topped at 4,511 feet. Other tops: Tonkawa, 2,705 feet; Cleveland sand, 3,300 feet; Oswego lime, 3,729 feet; Bartlesville sand, 4,105 feet; Mississippi lime, 4,295 feet; Chattanooga shale, 4,322 feet; Hunton lime, 4,392 feet; Sylvan shale, 4,411 feet; Viola lime, 4,474 feet; Wilcox sand, 4,603 feet. It showed for 5 to 15 bbls. of oil an hour in sand, but plugged back and completed as gas well after packer stuck. Same operators have started work at No. 1 Spear, SE SE NE section 20-17-3, northwest of the discovery well.

R. L. Kemp No. 1 Wright, NW NE SE section 26-17-6, was dry and abandoned at 2,638 feet, total depth.

Fleetborn Oil Corp. No. 1 Turner, NW NW SE section 28-17-5, wildcat south of Cushing but in Lincoln County, had second Wilcox sand at 3,953-4,001 feet; plugged back 3 feet and was due to test. It produced 4,000,000 feet of gas in first Wilcox sand at 3,953-67 feet.

Garvin County

Cox & Hamon No. 7 Davis, SW NW SE section 32-1n-3w, Tussy area, Garvin County, pumped 165 bbls. of oil in 24 hours and was completed after



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Our field photographer was fortunate in meeting S. H. Benner of Tulsa, superintendent of production for The Texas Co. (right) together with R. M. Langdon, district production superintendent, with headquarters in Seminole, Okla. They were on a tour of inspection

plugging back from 2,903 feet, total depth, to 2,388 feet. It had pay at 2,020-60 feet and 2,185-2,323 feet.

C. A. Luttrell and others No. 1 Howell, NW SE NW section 34-1n-1e, wildcat in southern Garvin County, has been taken over by Henry Rosenthal, and will be drilled by Hayes Drilling Co. It was bottomed at 160 feet.

Pottawatomie County

Carter Oil Co. No. 1 Kay, NW NW SE section 26-11-6, Keokuk area, Pottawatomie County, topped Misener sand at 4,110 feet; Hunton lime 4,113-20 feet, total depth, was shot and acidized and flowed 209 bbls. of oil in 24 hours, through casing, completed.

Elbar Oil Corp. No. 1-A Wyatt, SE NE NW section 10-7-4, an old well in the St. Louis district, ripped casing at 3,475-95 feet, shot with 40 quarts and was cleaning out. It had 70 feet of oil in the hole.

Payne County

Wood Oil Co. No. 1-A Shannon, NW SE SW section 23-18-3, Payne County, topped Bartlesville sand at 3,680 feet and was bottomed at 4,009 feet. It pumped 20 bbls. of oil and 800 bbls. of water in 24 hours and was completed.

Creek County

Klingensmith and others No. 3-A Gilcrease, CSL SE SE section 33-17-12, Glenn pool area, had Wilcox sand at 2,264-84 feet, total depth, was shot with 100 quarts and swabbed and flowed 300 bbls. of oil, completed.

Jake Scott and others No. 1-A Hawkins, NW SW SE section 5-18-7, Cushing field, had a hole full of water in lime at 2,748-77 feet, total depth; plugged back to 2,615 feet, was shot and pumped 5 bbls. of oil and 50 bbls. of water, completed.

L. Abraham and other No. 2 Holman, SE NE NE section 24-17-9, had Layton sand at 975-1,125 feet, total depth, produced 1,500,000 feet of gas and was completed.

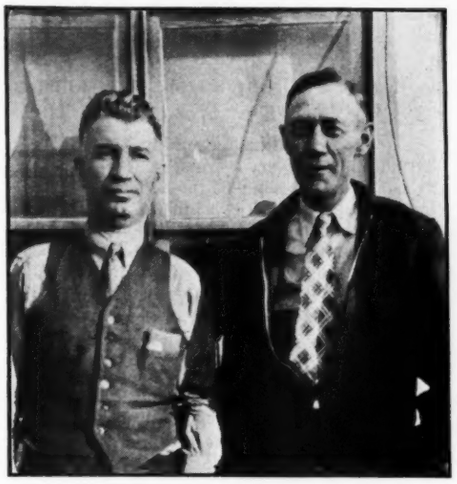
New work in Creek County: L. B. Jackson No. 1-A Kelly, SE NE NW section 2-17-8, moving in machine; A. B. Ice No. 1-B Baker, CSL SE NE section 14-17-10, rigging up machine; Klingensmith and others No. 4-A Gilcrease, SE cor. section 33-17-12, rigging up machine; Sinclair Prairie Oil Co. No. 13 Gilcrease, NE SW SE section 33-17-12, spudded; Gled Oil Co. No. 11 Koch, C SE NE section 20-19-9, bottomed in top of Red Fork sand at 2,311 feet, lowering 5-inch casing to top of Skinner sand at 2,183 feet.

Okmulgee County

Link Oil Co. No. 17 McCrory, SE SW NE section 28-13-14, Okmulgee County, was completed as a repressure well at 1,606 feet, total depth.

G. F. Collins No. 1-A Webb, NW SE SW section 27-16-11, an old well, was deepened from 2,455 feet to Wilcox sand at 2,890-98 feet, total depth, had a hole full of water and was abandoned.

Eagle Picher Lead & Zinc Co. No. 2 Henry, NW NW SE section 27-12-12, had rig on ground. English and others No. 3 Stewart, SW SW SE section 1-14-14, had spudded.



This pair of active oil men took enough time off to be snapped by one of our staff men. They are H. K. Armstrong, production superintendent for the Atlantic Refining Co. in the Seminole area, Oklahoma, and G. G. Brackney, material foreman for the same company

Muskogee County

M. S. Mussellem No. 1 Jennings, NW NW SW section 4-13-19, new operation in Muskogee County, was shut down for water at 150 feet.

Cleveland County

Palace Oil Co. No. 1 Tharnbraugh, SW NW SE section 31-9-1w, was location for a wildcat east of Norman, in Cleveland County.

Kay County

Helmerich & Payne has started work at a new Kay County wildcat at No. 1 Constant, SW SW NE section 17-28-2w, northeast of the Webb pool in Grant County.

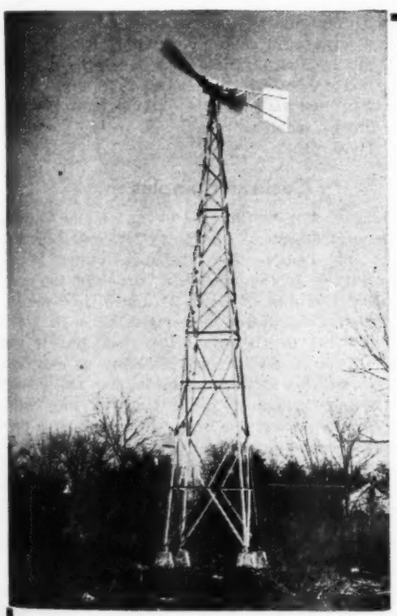
Logan County

Harry Blackstock No. 1 W. R. Prince, SE NE SW section 11-17-3w, is a location for a wildcat in Logan County, northwest of Guthrie. Carter Oil Co. and others No. 5 Walker, NE NW NE section 33-17-4w, Crescent field, was a location. Same operator's No. 4 Walker, SE NW NE section 33-17-4w, and No. 4 Miller, NW NW SE section 28-17-4w, were locations.

Magnetic Storm

Tucson, Ariz., observatory of the U. S. Coast and Geodetic Survey report severe magnetic storm began at 5 p.m. (C.S.T.) on Nov. 28 and ended at 5 p.m. (C.S.T.) Nov. 29. Telegram follows:

"Severe storm began twenty-eight. Seventeen. Ended twenty-ninth. Seventeen. Central Time."



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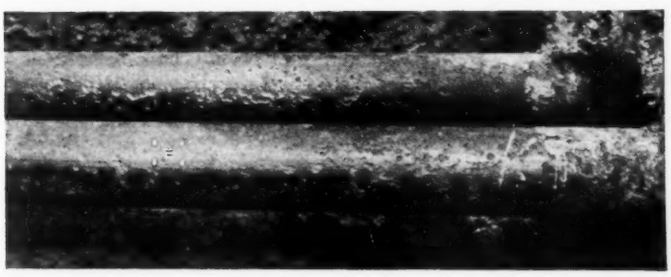

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West and North Texas

By
L. E. BREDBERG

CONNECTING LINK IN NORTH WINKLER A DISAPPOINTMENT

FORT WORTH, Tex., Dec. 7.—The wildcat of Bert Fields and others in section 3, Block C-23, about 2 miles northwest of production in Winkler County and about the same distance south of production over the state line in New Mexico, has been completed for only a small well. It was drilled to a total depth of 3,210 feet, but was plugged back to 3,171 feet in an effort to shut off water, which was unsuccessful. After acidizing and cleaning out it made only 84 bbls. of oil and 84 bbls. of water per day on gas lift, from pay topped at 3,120 feet. Regardless of its small production, Adams and Bradley are moving in material for a west offset on the Edwards ranch, in section 6. The test just completed was considered as a possibility for linking Texas and New Mexico production in one continuous pool, and may prove such a link yet when other tests are drilled on intervening leases.

Interesting Test

The Humble Oil & Refining Co. No. 1 Cowden, SW quarter of section 30, Block 44, Township 1n, T.P. Survey, about 2 miles southeast of the Cummins area and about 2 miles northwest of the Goldsmith field, is one of the most important tests in Ector County, for it will help to prove a connecting link between the Goldsmith and Cummins areas, which would mean an extension of the Goldsmith field at least another 4 miles, drawing its length out to 10 miles from southeast to northwest.

This test is now shut down waiting on cement to set after cementing 7-inch pipe at 4,082 feet, with total depth of 4,275 feet, in soft lime. It had a showing of oil at 4,257-75 feet and will undoubtedly make a producer. The Texas Pacific Coal & Oil Co. is drilling a test 1 mile to the southeast in the NE cor. section 31, which if it proves a producer, will also help prove a connecting link between the two pools. It is drilling below 4,025 feet in lime.

Ector Extension

Phillips Petroleum Co. and Pure Oil Co. No. 7 Clyde Cowden, located in the SW quarter of section 13, Block 44, Township 1s, T.&P. Survey, Ector County, proved a half-mile eastern extension to the Goldsmith field this week when it headed 480 bbls. of oil in 11 hours while running tubing. It had previously flowed 200 bbls. of oil in four hours through drill pipe on a test made at total depth of 4,165 feet. The oil is coming from saturated lime logged at 4,072-87 feet and from 4,119-65 feet. With an extension completed to the west last week by the Gulf Oil Corp., and this new extension, the field is proven at least 2 miles in width from east to west.

Gaines Discovery

The second discovery for Gaines County, Amerada Petroleum Corp. and others No. 1-A Averitt, located in section 228, Block G, W.T.R.R. Survey, 3 miles northwest of Seminole, has been flowing around 200 bbls. per day with around 250,000 feet of gas, through 1-inch tubing choke, registering 2,025 pounds pressure on tubing. Total depth is 5,029 feet. It has been acidized twice in an effort to step up the production. Although a small well, companies owning offset leases will be required to drill some of them immediately due to short length of time these leases have to run. A former test, a northeast offset, proved a wet gasser when drilled last year and junked when drill pipe stuck in the hole at 4,910 feet.

Dawson Discovery

The Dawson County discovery of Ray Albaugh and others on the John Robinson lands, in the NW quarter of section 46, Block M, E.L.R.R. Survey, in the northwest corner of Dawson County, and about 15 miles northwest of Lamesa, so far does not prove a good commercial producer although it is pumping oil. It is bottomed at 5,038 feet and during a six-hour pumping test it produced 15 bbls. of oil and 3 bbls. of salt water, pumping intermittently during the week.

The first showing of oil in this test was logged at 4,967-69 feet and an increase was registered at 4,979-82 feet. This is the first production the county has received. The showing will no doubt inspire other wildcatting in the county.

A test of interest will be that of the Getty Oil Co. 2 miles east of the Deep Rock pool in Andrews County. The company is moving in material on location in the SW cor. of section 8, Block A-46, P.S.L. Survey, on a lease farmed out by the Continental Oil Co. This was the only wildcat staked in the district this week, although several semi-wildcats were reported out of the total of 43 locations staked for new tests in the district. The Davidson Drilling Co. of Fort Worth has contract to sink this wildcat.

Means Extension

The Sun Oil Co. extended the Means field in Andrews County one-half mile west by its No. 1-B Means, located in section 22, Block A-35, P.S.L. Survey. It topped the pay at 4,448 feet and was drilled to a total depth of 4,536 feet before being shot with 300 quarts of nitro from 4,248-4,535 feet. After shooting and cleaning out it flowed 758 bbls. of oil in 24 hours. It is to the south and west of the main part of the Means field and creates more than just half a mile extension to the west for it proves much more acreage to the southwest of the field also.

Cochran Completion

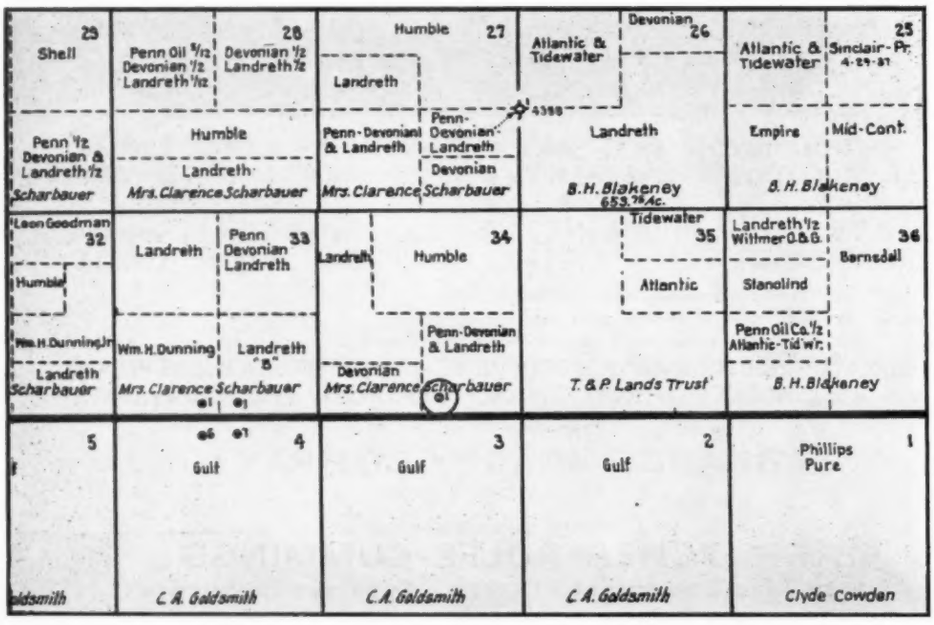
The Cochran County discovery of the Cascade Oil Co. and others on the E. B. Duggan ranch, in Labour 13, League 55, Oldham County School Lands Survey, in the southeast corner of the county, flowed 168 bbls. of oil in 24 hours this week on a Railroad Commission test made through 2-inch tubing. Total depth was 5,198 feet, but it was plugged back 30 feet before shooting to complete. This marks the first production for the county and the northernmost production in the entire West Texas district. No offset locations have been announced and the pool is due for slow development until it is given some sort of outlet other than tank trucks which will haul oil to a small refinery at Lubbock.

Important Wildcats

Finley, Sherry and others No. 1 Sealy Estate, located in the NE cor. of section 54, Block F, G.M. M.B.&A. Survey, 4 miles west of the O'Brien field in northern Ward County, logged saturated sandy lime from 2,995-3,000 feet, showing oil at 2,975-80 feet and is coring ahead in lime around 3,020 feet appearing as a possible producer and a new pool opener for this part of the county.

WEST CENTRAL AND NORTH CENTRAL TEXAS DISTRICT

This week three wildcat locations were staked in the West Central or Ranger district, and six tests were completed, two proving dry and four producers. Callahan County is to receive a 2,500-foot test on the Williams ranch 7 miles northeast of Baird, and Shackelford County will receive the other two wildcats, one of which will be drilled by Jones & Stasney and others on the Dawson



Test in section 34, Block 44, which will no doubt prove another extensioner to the Scharbauer-Goldsmith pool in Ector County. It is 1 mile east of production.—(Southwest Mapping Co., Fort Worth, Tex.)

and Conway lands, 2 miles north of the Morris-Buie pool.

The deep test drilled by W. K. Gordon and others on the S. B. Cantey lands 1 mile southeast of Metcalf Gap, in section 44, Block 2, T.&P. Survey, Palo Pinto County, has been abandoned at a total depth of 3,555 feet. This was an interesting test and logged some gas showings, but failed to make either a gas or oil producer. It is about 10 miles north of production near Strawn.

The wildcat drilled 1½ miles south of Baird by L. A. Warren and others on the R. L. Griggs lands, in section 121, B.B.B.&C. Survey, Callahan County, has been abandoned at a total depth of 1,278 feet. It was drilling for the pay found in the wells in the town of Baird.

The wildcat test drilling by S. S. Alexander on the Goldston lands, in T.E.L. Survey, Abstract 1,076, 3 miles northeast of Graham in Young County, failed to pick up commercial production in drilling to 4,500 feet and is now plugging back to shoot a saturated lime logged at 4,030-4,145 feet.

H. L. Singleton and associates have staked location for a 4,000-foot wildcat test to be drilled on the J. A. Caudle lands, in the R. S. Owens Survey, about 3 miles south of the Oil City-Bunger area of South Young County, but over in Stephens County.

M. L. Harris and others No. 1 D. R. Williams, located in the A. C. Bailey Survey, Abstract 44, about 1 mile north of the Anderson-Kerr pool 3 miles east of Gainesville in Cooke County, has failed to come through as a producer, has struck salt water and probably will be abandoned at total depth of 3,170 feet. Casing was set at 2,161 feet, on top of the sand, but salt water showed up in deepening. This test defines the pool on the north.

Panhandle District

There were 18 completions reported in the Panhandle district this week, three of which were gassers and the remainder oilers adding 7,655 bbls. potential new production to the district.

If reports from Childress are correct, Lesley Fain and others will drill a wildcat test in section 544, Block H, W.&N.W.R.R. Survey, on the Russell ranch 9 miles southeast of Childress in the southeastern corner of the county by that same name. The Alma Oil Co., which drilled a deep test southeast of Kirkland last year, which threatened to make a producer and open the first production for the county, assembled the block around this new test, which is expected to go to 3,000 feet. The Portable Drilling Corp. of Oklahoma has contract to sink the test, which is an extreme wildcat for the district.

WEST TEXAS COMPLETIONS

Andrews County

Humble Oil & Refining Co. No. 8 Means, 4,475-4,555 feet, acidized and shot, 8 bbls per hour on gas lift.

Ector County

Phillips and Pure Oil Co. No. 6 Cowden, 4,160 feet, 2,322 bbls. Atlantic Refining Co. and others No. 2 Blakeney, 4,150-4,250 feet, shot, 404 bbls. Skelly Oil Co. No. 5-A Scharbauer, 3,460-3,630 feet, shot, 549 bbls. Gulf Oil Corp. No. 10-B Connell, 3,435-3,700 feet, shot, 112 bbls. in 12 hours.

Fisher County

General Crude Oil Co. No. 10 Flannigan, 3,095-3,114 feet, 395 bbls.

Howard County

Merrick and Bristow No. 2 Hooks, 2,930-54 feet, 102 bbls. Imperial Oil Co. No. 15 Hooks, 3,141-95 feet, shot, 130 bbls. in 14 hours. Stanolind Oil & Gas Co. No. 1-B Clay, 2,456-91 feet, shot, 182 bbls. in 18 hours. Merrick and Lamb No. 7 Clay, 2,500 feet, shot and acidized, 18 bbls. Continental Oil Co. No. 17 Settles, 1,265-1,308 feet, 273 bbls. The California Co. No. 6 Dodge, 2,530-2,810 feet, shot, 500 bbls.

Jones County

Ferris and Fikes and others No. 2 Guitar, 2,014 ft, acidized, 390 bbls. in 19 hours. Humble Oil & Refining Co. No. 1 Alexander, dry and abandoned, 2,220 feet.

Pecos County

Lynch and Lyman No. 2 L. L. Byrne, dry and abandoned, 1,500 feet, elevation 2,516 feet. P. Childress No. 11 Smith, 242-355 feet, 62 bbls. Ohio Oil Co. No. 53-A Yates, 1,547 feet, 313 bbls. per hour.

Upton County

Black and others No. 7 Lane, 2,313-33 feet, acidized, 210 bbls. Gulf Oil Corp. No. 22 Crier-McElroy, 2,855-78 feet, shot, 266 bbls.

Ward County

C. F. Kolp No. 2 Hardage and Wilson, 2,598 feet, plugged back to 2,540 feet, shot, 84 bbls; No. 2 York, 2,335-2,550 feet, shot, 242 bbls. Pat Hill No. 5 Clements, 2,205-2,310 feet, shot, 720 bbls.; No. 6 Clements, 2,244-2,343 feet, shot, 325 bbls. Grisham and Hunter No. 2 Himmel, 2,257-2,395 feet, shot, 305 bbls. Empire Gas & Fuel Co. No. 13 McDonald, 2,230-2,460 feet, shot, 665 bbls.; No. 14 McDonald, 2,240-2,480 feet, shot, 1,579 bbls. Humble Oil & Refining Co. No. 9 Richter 2,840-2,940 feet, shot, 1,164 bbls. Rio Bravo Oil Co. No. 13 Olcott, 2,441-55 feet, shot, 379 bbls. Richardson No. 13 Hathaway, 2,554-2,656 feet, shot, 555 bbls. Gulf Oil Corp. No. 7 Estes, 2,460-2,600 feet, shot, 5,002 bbls.; No. 74 O'Brien, 2,630-2,770 feet, shot, 386 bbls.

Winkler County

Illinois Oil Co. No. 4-B Central State Bank of Abilene, 2,910-3,148 feet, shot, 1,494 bbls.; No. 5-A Central State Bank of Abilene, 2,839-3,100 feet, 1,950 bbls. Sinclair Prairie Oil Co. No. 9-B Walton, 2,790-2,975 feet, shot, 981 bbls.; No. 1 Vaden, 2,819-3,125 feet, shot, 55 bbls. in 8 hours; No. 4-A Leck, 3,090-3,101 feet, acidized, 887 bbls. Skelly Oil Co. No. 3 Colby, 2,795-3,110 feet, shot, 1,113 bbls. through 40/64-inch tubing choke. Humble Oil & Refining Co. No. 4-C Henderson 3,043-3,110 feet, 1,715 bbls. through seven-eighths inch choke.

Atlantic Refining Co. No. 4-B Leck, 3,030-70 feet, 112 bbls. per hour; No. 5-B Leck, 3,036-80 feet, 126 bbls. per hour; No. 6-B Leck, 3,040-70 feet, 186 bbls. per hour. Gulf Oil Corp. No. 11 Daugherty, 2,815-3,000 feet, 648 bbls.; No. 75 O'Brien, 3,209 feet, plugged back to 3,170 feet, shot, 77 bbls. Magnolia Petroleum Co. No. 40 Walton, 2,830-2,927 feet, shot, 713 bbls.; No. 41 Walton,

OK SLO-SET OIL WELL CEMENT

FOR HIGH TEMPERATURES . . . SULPHATE RESISTANT

A NEW OK CEMENT FOR OIL WELL CEMENTING AT HIGH TEMPERATURES

Cementing of oil wells from 5,000 to 10,000 feet deep requires more time to pump the cement mixture into the well than at shallower depths, and this longer time plus the high temperatures sometimes encountered in deep wells makes it desirable to use a slow-setting cement on these jobs. Such a cement will not stiffen under high temperatures and pressures while being pumped into the well and thus slow down and even stop the cementing job before completion.

To meet the demand for such a product by the oil field operators, we have perfected our new product—

OK SLO-SET OIL WELL CEMENT

to meet the most exacting requirements of this type of oil field cementing.

OK SLO-SET CEMENT retains its flowability for a period of time amply sufficient for pumping the cement mixture completely into the well, under conditions of great depth, high pressure and high temperature. This is shown in the accompanying Setting Time Tests. When the period of delayed setting time is over, however, and the cement safely in place in the well, hardening takes place rapidly, as shown by the high tensile and compressive strengths in the accompanying tabulation, both at ordinary temperatures and at high temperatures.

OK SLO-SET CEMENT is a true Portland Cement and contains no admixtures or adulterants.

Use OK Slo-Set Cement and Protect Your Drilling Investment of Many Thousands of Dollars, which may be impaired or lost entirely by an unsuccessful cementing job

LABORATORY TESTS ON OK SLO-SET CEMENT

SETTING TIME TESTS

VICAT NEEDLE

TEMPERATURE	MIXING WATER	INITIAL SET
70° F.	40%	8 Hrs. 30 Min.
130° F.	40%	2 Hrs. 35 Min.
194° F.	40%	3 Hrs. 15 Min.

STRENGTH TESTS

POUNDS PER SQ. INCH

TEMPERATURE	MIXING WATER	—1 DA.—		—3 DA.—		—7 DA.—	
		TENSILE	COMPRESSIVE	TENSILE	COMPRESSIVE	TENSILE	COMPRESSIVE
70° F.	40%	170	1350	325	3300	460	5160
130° F.	40%	350	4030	435	6360	550	6800
194° F.	40%	375	4000	400	4100	425	4200

OKLAHOMA PORTLAND CEMENT CO.
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ARKANSAS PORTLAND CEMENT CO.
WALLACE BLDG. LITTLE ROCK, ARK.

2,850-2,926 feet, shot, 761 bbls.; No. 43 Walton, 2,828-2,980 feet, shot, 1,059 bbls.; No. 44 Walton, 2,835-2,964 feet, shot, 959 bbls. B. Fields and others No. 1 Walton, 3,120-3,210 feet, plugged back to 3,171 feet, acidized, 84 bbls. oil and 84 bbls. water on gas lift.

PANHANDLE COMPLETIONS

Carson County

Hagy and others No. 1 Bryan, 2475-2,685 feet, 20,800,000 feet of gas.

Gray County

Claude Drilling Co. No. 2 Gorenflo, 3,165-3,293 feet, 1,057 bbls. Empire Gas & Fuel Co. No. 5-B Archer, 3,182-3,220 feet, 559 bbls. on pump. King Oil Co. No. 6 North Volmert, 3,228-75 feet, shot, 490 bbls. on pump. Magnolia Petroleum Co. No. 4 Barrett, 3,210-80 feet, shot, 367 bbls. on pump; No. 5 Latham, 3,071-90 feet, 337 bbls. on pump. Skelly Oil Co. No. 80 Schafer, 3,185-3,270 feet, shot, 805 bbls. on pump. Texas Co. No. 10 Harrah, 3,140-3,252 feet, shot, 667 bbls. on pump. Texwell Oil Co. No. 5 McConnell, 3,195-3,326 feet, 119 bbls. Warner Oil Co. No. 3 Chapman, 2,612-61 feet, 864 bbls. on pump.

Hutchinson County

Benonine Oil Co. No. 3-B Starnes, 3,089-3,165 feet, shot, 1,110 bbls. on pump. Phillips Petroleum Co. No. 2 Bryan, 3,035-84 feet, shot, 437 bbls. on pump. Stekoll Oil Producers No. 4 Dial, 3,095-3,105 feet, 387 bbls. on pump.

Wheeler County

Cub Oil Co. No. 1 Major, 2,465 feet, plugged back to 2,415 feet, 19 bbls. fluid, 28 per cent water. Lela Oil Co. No. 9 Laycock, 2,154-2,256 feet, plugged back to 2,247 feet, shot, 20 bbls. on pump. Ohio Fuel Supply Co. No. 1 Finley, 1,745-1,971 feet, 37,186,000 feet gas. Palmer and others No. 3 Linkey, 1,815-1,962 feet, 16,814,000 feet gas. Skelly Oil Co. No. 24 Johnson, 2,425-2,610 feet, 422 bbls. on pump.

There is a Goulds pump for every purpose in the field, on the pipe line and in the refinery. Each is designed with a high efficiency that materially reduces pumping costs and is built for long trouble-free service under the most severe operating conditions.

Through Goulds engineers the cumulative experience of over ninety years devoted to pumps and pumping is at your disposal. A discussion of your problem imposes no obligation—it may lead to worthwhile economies.

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6525

CENTRAL TEXAS COMPLETIONS

Callahan County

L. A. Warren and others No. 1 R. L. Griggs, 1½ miles South of Baird, total depth 1,278 feet, dry and abandoned.

Coleman County

D. R. Semmes and others No. 5 Stewardson, 8 miles southwest of Santa Anna, gas sand 1,654-69 feet, oil sand 1,670-82 feet, 23 bbls. oil and 1,000,000 feet gas.

Palo Pinto County

W. K. Gordon and others No. 1 S. B. Cantey, 1 mile southeast of Metcalf Gap, total depth 3,555 feet, dry and abandoned.

Shackelford County

Roeser & Pendleton and others No. 7 Morris, Morris-Buie pool, 1,600-09 feet, 55 bbls. Sandefer & Thompson "A," center west line county, 1,642-52 feet, 24 bbls. Aaron Cohen No. 4 C. H. King, center west line county, 1,605-15 feet, 18 bbls.

NORTH TEXAS COMPLETIONS

Archer County

Deep Oil Development Co. No. 3 Wilson No. 5, 2,224-27 feet, 125 bbls. Kimbell & Bohner No. 15 Carpenter, 1,037-40 feet, 10 bbls. J. T. Miller No. 1 Roller, 1,309 feet, dry.

Baylor County

Ingleright and others No. 1 Cope, 1,735 feet, dry.

Cooke County

Anderson & Kerr No. 3 Wilson, 2,020-46 feet, 175 bbls.; No. 5 Wilson, 1,996 feet, dry. Bridwell Oil Co. No. 6 R. W. Trew, 1,626-36 feet, 25 bbls. W. G. Mappes No. 1 W. R. Harper, 1,689 feet, dry. F. W. Merrick, Inc., No. 2 Davidson, 1,940-55 feet, 15 bbls. C. Newburn No. 1 Dotson, 2,132 feet, dry.

Foard County

The Texas Co. No. 8 Johnson, 3,537-60 feet, 175 bbls.

Jack County

Bennett Petroleum Corp. No. 2 Chambers, 2,970-3,005 feet, 450 bbls. Hill and others No. 2 C.R.I. &G., 2,920-95 feet, 125 bbls. J. R. Meeker and others No. 2 Mrs. D. C. Clayton, 2,929-3,000 feet, 400 bbls. Mullendore, Berry & Berry No. 2 Chambers, 2,928-95 feet, 550 bbls. Texas Plains Oil Co. No. 5 Terrell, 705 feet, dry.

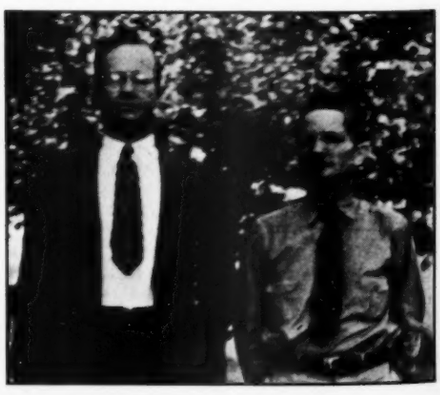
Montague County

Continental Oil Co. No. 10 Jones, 835-65 feet, 10 bbls.

Young County

Associated Developers No. 1 E. G. Williamson, 3,000 feet, dry. W. F. Collins No. 1 N. L. Hardy, 602-10 feet, 30 bbls. Corvette Oil Corp. No. 1 W. A. Rushing, 1,000 feet, dry. J. P. Doss No. 1 D. M. Spearman, 580 feet, dry. Fresno Oil Co. No. 8 J. W. Cox, 622 feet, dry. L. G. Hawkins No. 7 J. M. Kirkland, 700-05 feet, 15 bbls. J. J. Moran & Wotola No. 14 W. B. Howard, 896-906 feet, 90 bbls. Morris & Spoonts No. 1 Mrs. H. K. Weems, 667 feet, dry. Owenwood Pool No. 3 Well No. 1

(Continued on Page 84)



Graham P. Crutchfield, chief geologist and engineer, and his assistant Vaughn H. Moore, Roeser & Pendleton, Inc., district field office, Albany, Tex.

Rocky Mountain Area

By
T. R. INGRAM

MAY SHARE BURDEN OF TEST WORK IN EASTERN COLORADO

DENVER, Colo., Dec. 7. — Oil companies holding blocks of leases in eastern Colorado may adopt a more liberal policy in wildcatting next year in which there will be a broader spirit of cooperation. The old Boulder field is being tested again near the discovery well which came in 36 years ago and produced up to a few months ago. The Mountain Fuel Supply Co.'s oil discovery on the Powder Wash structure in Moffat County gauged 47½ bbls. per hour initial. Location was made for another well.

The Lance Creek field in Wyoming had three completions, one of which is close to the edge and another, dry and abandoned, was a mile south of production. One new location was released in that pool. Three small wells were completed in the Osage field.

Montana had a lively week with six completions and five new locations in Cut Bank and four completions and four new operations in the Kevin-Sunburst field.

Continental Oil Co. completed a 230-bbl. flowing well at 847 feet in northwestern New Mexico. The Kutz Canon Oil & Gas Co.'s test drilling since 1928 was completed as a small gasser. Three failures in the shallow sand were reported in the Red Mountain district in McKinley County.

NEW MEXICO

Southeastern New Mexico had a busy week with 20 completions, including 18 oil wells, 1 gas well and 1 failure. The largest producers of the week were in the Monument field, where eight wells were completed, six of which had initial production of more than 2,000 bbls. each.

Largest of the new wells was Shell Petroleum Corp. No. 3 Cooper "B," C SW NW section 4-20-37. It flowed 3,680 bbls. of oil naturally through tubing in 24 hours from pay at 3,754-3,899 feet, total depth. Gas gauged 1,590,000 feet. The Shell company also had a big well at No. 2 Cooper "B," C NW NW section 4-20-37. After acidizing with 2,000 gallons, it flowed 3,160 bbls. of oil through tubing in 24 hours, with gas measuring 2,170,000 feet.

The Texas Co. No. 3 Cooper, C SW NE section 5-20-37, was another prize well of the week with an initial production of 3,120 bbls. of oil naturally through three-fourths inch tubing choke. It had pay at 3,760-3,886 feet, total depth, and produced 1,660,000 feet of gas with the oil. Same operator's No. 2 Cooper, C NE NE section 5-20-37, had pay at 3,750-3,900 feet, total depth, and flowed 2,676 bbls. of oil naturally through tubing choke in 24 hours. Gas gauged 1,400,000 feet. The Texas Co.'s third well of the week was No. 4 Mattern, C NE SW, section 20-19-37, which was acidized with 2,000 gallons and flowed 648 bbls. of oil through tubing in 24 hours. It had pay at 3,835-3,982 feet, total depth.

Another big Monument well, Amerada Petroleum Corp. No. 7 Weir, C SW SE section 26-19-36, flowed 2,472 bbls. of oil through tubing in 24 hours after acidizing with 2,000 gallons. Gas volume was 2,680,000 feet. Production was from pay at 3,877-3,993 feet, total depth.

Gulf Oil Corp. had one of the big wells at No. 1 Theo. Anderson, C SW SE section 8-20-37. After topping pay at 3,835 feet and drilling to 3,872 feet, total depth, it flowed 2,076 bbls. of oil naturally through tubing in 24 hours. Gas volume was 1,475,000 feet.

Humble Oil & Refining Co. No. 1 State "D," C SE NE section 20-19-37, flowed 744 bbls. of oil through tubing after acidizing with 1,000 gallons. Production was from pay at 3,912-96 feet, total depth.

Five wells were completed in the Eunice field. Humble Oil & Refining Co. No. 6 State Aggies, C SW NE section 31-20-37, topped pay at 3,788 feet and was bottomed at 3,840 feet. After acidizing with 2,000 gallons, it flowed 480 bbls. of oil through tubing in 24 hours.

Jim Murray and others No. 3 Wallace, C N half NE NW section 3-21-36, was shot with 250 quarts and acidized with 8,000 gallons, and then flowed 192 bbls. of oil through tubing in 24 hours. It was bottomed at 3,875 feet in pay topped at 3,796 feet.

Texas Pacific Coal & Oil Co. No. 2 State "A," Account 2, C NW SW section 5-22-36, flowed 165 bbls. of oil through tubing after shooting with 280 quarts and acidizing with 2,000 gallons. It had pay at 3,750-3,968 feet, total depth, and plugged back to 3,857 feet. Gulf Oil Corp. No. 2 Orcutt "C," C NE NE section 6-21-36, had pay at 3,755-3,855 feet, total depth; acidized with 1,000 gallons and flowed 420 bbls. of oil through tubing in 24 hours.

Continental Oil Co. No. 4-D-15 State, C SW SE section 15-21-36, flowed 360 bbls. of oil naturally through three-fourths inch tubing choke in 24 hours. Production was from pay at 3,800-89 feet, total depth.

Two naturally flowing wells were completed in the Plains Knight area which recently extended the Stuart sand pool to the northwest. Repollo Oil Co. No. 1 Jamison, section 21-24-37, flowed 599 bbls. of oil in 24 hours from pay at 3,465-94 feet. total depth in the lime. Plains Production Co. No. 2 Knight, C NW SW section 22-24-37, east offset to the same operator's No. 1 Knight extension well, had pay at 3,398-3,485 feet, total depth, and flowed 154 bbls. of oil through tubing choke in 24 hours.

Other new Lea County wells were: Getty Oil Co. No. 1 Hardy, C SE SE section 20-21-37; pay at 3,710-3,800 feet, total depth; shot with 120 quarts; flowed 528 bbls. of oil through one-half inch tubing choke in 24 hours. Continental Oil Co. No. 1-A-15 Elliott, SE cor. section 15-22-37, topped pay at 3,525 feet; total depth, 3,640 feet; shot and acidized and flowed 25 bbls. of oil through tubing choke in 24 hours. Skelly Oil Co. No. 1-A Stuart, SW NE NE NW section 15-25-37, was shot with 130 quarts and flowed 262 bbls. of oil through tubing in 24 hours. It produced from pay at 3,364-3,402 feet, total depth.

A big gas well was completed by Empire Oil & Refining Co. at No. 1 Sim Dabbs, C NW NW section 23-25-37, more than a mile southeast of production in the Stuart sand pool. It produced 37,000,000 feet of wet gas from pay at 3,162-3,361 feet, total depth.

William Dooley No. 1 Hatchett, NE SW NE section 11-20-36, Eddy County wildcat, was dry and abandoned after drilling to 803 feet, total depth, and plugging back to test a small show of oil at 445 feet.

Monument Area

Gulf Oil Corp. No. 2 Kutter-State "B," C SW NW sec. 38-19-37. T.D. 3,946 ft.; failed to flow after acidizing; reacidized with 5,000 gallons; flowed 20 bbls. oil in 5 hrs.

Atlantic Pet. Corp. No. 1 Crutchfield, C NE SE sec. 32-19-37. T.D. 3,914 ft.; packer 3,860 ft.; flowed 15 bbls. fluid per hr.

Skelly Oil Co. No. 2 State "F," C SW SE sec. 17-20-37. Cellar and pits.

Phillips Pet. Co. and Anderson-Prichard Oil Corp. No. 1 Hobbs, C NE SW sec. 18-20-37. T.D. 3,861 ft.; to test.

Gulf Oil Corp. No. 2 Love, C SE SE sec. 32-19-37. T.D. 3,898 ft.; reacidized; flowed 78 bbls.; testing.

Amerada Pet. Corp. No. 1 Adkins, C SW SW sec. 5-20-37. T.D. 3,860 ft.

Continental Oil Co. No. 5-A-3 Reed, SE SW NE sec. 3-20-36. Drlg. 3,815 ft.

Continental Oil Co. No. 1 Britt "A," C NE NW sec. 18-20-37. T.D. 3,860 ft.; to test.

Continental Oil Co. No. 1 State "A," C SW SW sec. 26-19-36. T.D. 3,985 ft.; testing.

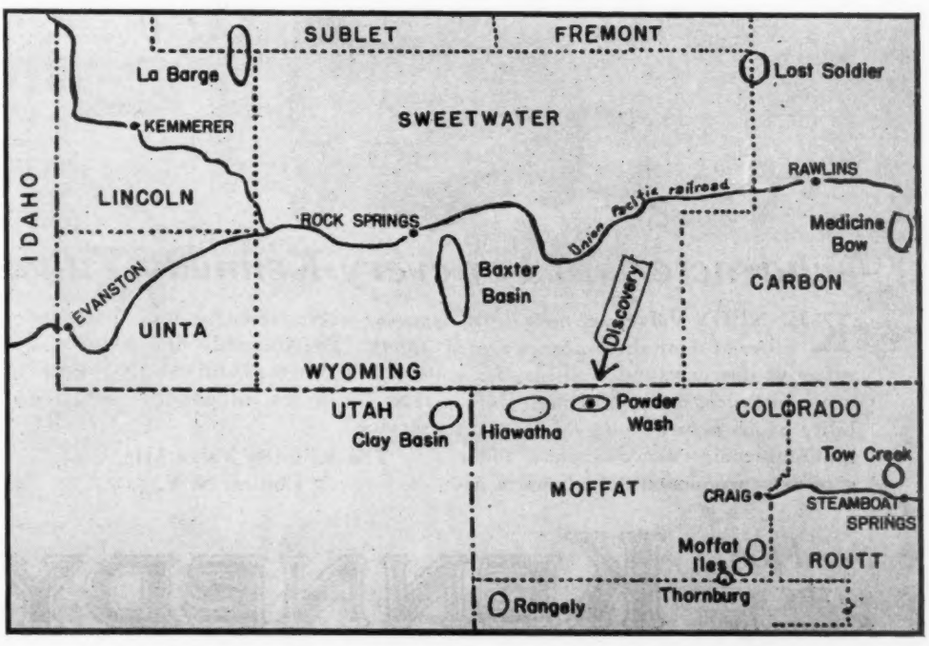
Continental Oil Co. No. 1 Sanderson "A," C E half NE NE sec. 10-20-36. Drlg. 3,075 ft.

Continental Oil Co. No. 2 Sanderson "A," C N half NW SE sec. 11-20-36. T.D. 1,101 ft.; set csg.

Amerada Pet. Corp. No. 7 State "T," C NW SW sec. 28-19-37. Drlg. 2,546 ft.

Amerada Pet. Corp. No. 5 Andrews, C SW NW sec. 12-20-36. Drlg. 3,502 ft.

Stanolind O. & G. Co. No. 1 Gillully, C SW SW sec. 8-20-37. Drlg. 2,417 ft.



First major discovery in Rocky Mountain area in rocks of Tertiary age on the Powder Wash structure, Moffat County, Colorado, in the Mountain Fuel Supply Co. No. 1 Allen

Amerada Pet. Corp. No. 6 State "T," C NW NE sec. 20-19-37. Drlg. 3,220 ft.
Empire O. & R. Co. No. 3 Laughlin, C SE SE sec. 5-20-37. Drlg. 3,120 ft.
Ohio Oil Co. No. 6 Barber, C NW SW sec. 6-20-37. Drlg. 2,705 ft.
Anderson-Prichard Oil Corp. No. 5 Britt, C NE SW sec. 7-20-37. Drlg. 2,710 ft.
Anderson-Prichard Oil Corp. No. 6 Britt, C SE SW sec. 7-20-37. Drlg. 2,160 ft.
Gulf Oil Corp. No. 1 Graham-State "G," C SW SE sec. 17-19-37. Drlg. 3,000 ft.
Gulf Oil Corp. No 3 Williams, C SE SE sec. 29-19-37. Drlg. 3,670 ft.
Ohio Oil Co. No. 7 Barber, C SW NW sec. 5-20-37. Drlg. 2,790 ft.
Anderson-Prichard Oil Corp. No. 1 Britt "B," C SE SW sec. 5-20-37. Drlg. 830 ft.
Continental Oil Co. No. 1 Britt "B," C NE NW sec. 8-20-37. R.U.R.
Ennisbrook Oil Corp. No. 1 Wulff, NW cor. sec. 17-20-37. Drlg. 1,164 ft.
Phillips Pet. Corp. No. 1 Patsy, C NW NE sec. 18-20-37. Rig.
Humble O. & R. Co. No. 1 State "E," C NW SW sec. 21-19-37. T.D. 1,435 ft.; W.O.C.
Gulf Oil Corp. No. 1 Hatchett, C NW SW sec. 33-19-37. Rig up.
Skelly Oil Co. No. 1 Van Etten, C NW SW sec. 9-20-37. T.D. 243 ft.; W.O.C.

Texas Co. No. 4 Cooper, C SE NE sec. 5-20-37. Drlg. 400 ft.
Amerada Pet. Corp. No. 3 State "T," C SE NW sec. 25-19-36. Drlg. 350 ft.
Humble O. & R. Co. No. 2 Laughlin, C SW SW sec. 4-20-37. Cellar and pits.

Eunice Area

Continental Oil Co. No. 5-B-14 Lockhart, C NW SW sec. 14-21-36. Drlg. 3,877 ft.
Continental Oil Co. No. 5-D-15 State, C SW NE sec. 15-21-36. T.D. 3,755 ft.; set csg.
Shell Pet. Corp. No. 2 State "A," NE cor. sec. 12-21-25. T.D. 3,891 ft.; tstg.
Gulf Oil Corp. No. 6 Orcutt, C SW NE sec. 6-21-36. T.D. 3,873 ft.; flowed 36 bbls. in 4 hrs.
Gulf Oil Corp. No. 1 L. White, C SE SE sec. 25-20-36. Drlg. 3,732 ft.
Gulf Oil Corp. No. 2 Bell-State "D," C SW SW sec. 6-21-36. T.D. 3,255 ft.; S.D.
Continental Oil Co. No. 6-D-15 State, C NE SE sec. 15-21-36. T.D. 3,865 ft.; to test.
Empire O. & R. Co. No. 2 State "F," C NE SE sec. 30-20-37. T.D. 3,713 ft.; W.O.C.
Gulf Oil Corp. No. 4 Orcutt "C," C SE NW sec. 6-21-36. T.D. 300 ft.; set csg.
Gulf Oil Corp. No. 3 Orcutt "C," C SW NE sec. 6-21-36. Drlg. 2,638 ft.
Amerada Pet. Corp. No. 4 Houston, C SW NE sec. 7-21-36. Drlg. 1,985 ft.

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Atlantic Ref. Co. No. 4 State "L," C NW SW sec. 6-21-36. Drlg. 3,370 ft.
Humble O. & R. Co. No. 7 Knox, C SW NE sec. 10-21-36. Drlg. 3,890 ft.
Gulf Oil Corp. No. 5 Orcutt "C," C SE SE sec. 36-20-36. Rig.
Humble O. & R. Co. No. 7 State-Aggies, C NW NE sec. 31-20-37. T.D. 163 ft.; set csg.
Getty Oil Corp. No. 1 State "D," C SE NE sec. 32-20-37. Drlg. 2,600 ft.
Skelly Oil Co. No. 1 State "G," C NW SE sec. 30-20-37. T.D. 240 ft.; W.O.C.
Shell Pet. Corp. No. 2 State "J," C SW SE sec. 32-20-37. T.D. 1,214 ft.; set csg.
Continental Oil Co. No. 17-B-4 Meyer, C NE NE sec. 4-21-36. R.U.R.
Shell Pet. Corp. No. 2 State "G," C NW NW sec. 6-21-36. Drlg. 1,095 ft.
Gulf Oil Corp. No. 2 Molly Campbell, C NE SW sec. 7-21-36. R.U.R.
Two States & Southern Pet. Ex. No. 1 McQuatters, C NW SE sec. 11-21-36. Loc.
Two States & Southern Pet. Ex. No. 2 McQuatters, C SE NE sec. 11-21-36. Cellar and pits.
Humble O. & R. Co. No. 8 Knox, C NE NE sec. 10-21-36. Cellar and pits.
Gulf Oil Corp. No. 1 J. H. Daly, NE NE SW sec. 6-22-36. Rig up.

Sims Area

Devonian Oil Co. No. 1 Christmas, NE NE SE sec. 28-22-37. Drlg. 1,900 ft.
Skelly Oil Co. No. 1 R. R. Simms "C," C SE SW sec. 3-23-37. Drlg. 2,175 ft.
Skelly Oil Co. No. 1 H. O. Simms "D," C SE NW sec. 3-23-37. T.D. 3,379 ft.; testing.
Skelly Oil Co. No. 1 W. P. Simms "B," C NW NE sec. 10-23-27. Drlg. 2,605 ft.
Empire O. & R. Co. No. 1 Walden, C SE NW sec. 21-22-37. Drlg. 3,353 ft.
Penrose & Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting on tools.
W. H. Street et al No. 1 Wood, C W½ SE NE NE sec. 22-22-37. Drlg. 1,150 ft.
Amon G. Carter No. 1 E. M. Elliott, sec. 22-22-37. Drlg. 1,168 ft.
J. E. Farrell No. 1 Walden "C," sec. 15-22-37. T.D. 3,156 ft.; fishing.
J. E. Farrell No. 1-A Walden, C SW NW sec. 15-22-37. Drlg. 2,230 ft.
Skelly Oil Co. No. 1 G. W. Sims, sec. 10-23-37. T.D. 3,607 ft.; fishing.
Skelly Oil Co. No. 2 R. R. Simms, C NE SW sec. 3-23-37. T.D. 1,196 ft.; W.O.C.
Skelly Oil Co. No. 3 Baker, C NE NW sec. 27-22-37. T.D. 167 ft.; set 9⅝-in. csg.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,514 ft.; S.D. for orders.
Yingling Oil Co. No. 1-B-3 Vaughan, C SE NW sec. 3-24-36. Bldg. rig.
Yingling Oil Co. No. 1-B-9 Vaughan, NE cor. sec. 9-24-36. Cellar and pits.
Shell Pet. Corp. No. 1 Guthrie, C SW SE sec. 34-23-36. Location.

Eddy County

Clint Murchison et al No. 1 State "A," C NE SW sec. 16-17-31. Drlg. 2,155 ft.
Barnsdall Oil Co. No. 4 Dodd, C SE SE sec. 22-17-29. Drlg. 2,560 ft.
Fred Brainard No. 1 Berry, C E½ NW NW sec. 23-17-27. Drlg. 1,382 ft.
Tignor-Etz & Keys No. 5 Keys "A," C E½ SW SW sec. 10-17-28. Drlg. 1,343 ft.
Etz Bros. No. 3 State, sec. 16-17-30. T.D. 3,252 ft.; estimated 30 bbls. daily.
Hammond et al No. 1 State, SW SE SW sec. 15-27-28. T.D. 1,967 ft.; to shoot.
Republic Prod. Co. No. 6 Russell, SW NE NW sec. 18-17-31. T.D. 3,535 ft.; pumped 20 bbls. in 24 hrs.
McGinley & Harwell No. 7 Mann, SW cor. sec. 4-18-27. Location.
Premier Pet. Co. No. 1 McIntyre "G," NW NW NE sec. 21-17-30. Drlg. 2,400 ft.
Flynn, Welch & Yates No. 75 State, C E½ SE SE sec. 10-19-28. Drlg. 580 ft.
Flynn, Welch & Yates No. 3 Gissler, SW SE SW sec. 14-17-30. Rigging up machine.
Flint Prod. Co. No. 1 Flint, SE SW SE sec. 14-17-30. Spudded.

Lea County—Miscellaneous

Continental Oil Co. No. 1 J. C. Farney "A," C SW SE sec. 5-23-36. Wildcat; drlg. 2,555 ft.
Plains Prod. Co. No. 3 J. A. E. Knight, C SE SE sec. 21-24-37. Drlg. 2,675 ft.
Shell Pet. Corp. No. 1 J. F. Black, C NW SE sec. 21-24-37. T.D. 3,449 ft.; fishing.
Plains Prod. Co. No. 4 Knight, C SW SW sec. 22-24-37. Cellar and pits.
Eppenauer Drlg. Co. No. 1 Stuart, NE NW NE sec. 23-25-27. Drlg. 825 ft.
Rowan et al No. 1 Mattern, C SW SE sec. 8-22-37. T.D. 3,789 ft.; swabbing and testing.
C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. T.D. 4,075 ft.; S.D.O.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 2,526 ft.; S.D.
Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-26-37. T.D. 3,754 ft.; S.D.O.
Stanolind O. & G. Co. No. 1 Langley, sec. 15-25-37. T.D. 3,413 ft.; P.B. to 3,409 ft.; testing.
Leonard No. 3 Lanchart, C NE NW sec. 21-25-37. Moving in material.
C. L. Carlock et al No. 1 Quincy-Ricker, C SE SE sec. 7-16-36. Wildcat; drlg. 2,050 ft.
J. C. Clower No. 1 Turner, C SE SE sec. 29-21-37. T.D. 3,485 ft.; drlg. on whipstock.
Culberson-Irwin & Stovall No. 2 Stuart, NW SE SE sec. 10-25-37. T.D. 3,277 ft.; fishing.
Samedan Oil Co. No. 2 Hughes, C NW SE sec. 4-23-37. T.D. 1,225 ft.; set csg.
Continental Oil Co. No. 1-A-24 Sholes, C SE SE sec. 24-25-36. T.D. 3,396 ft.; S.D.O.
Brown & Reynolds No. 1 Parcell, C NW SE sec. 8-21-38. Wildcat; drlg. 3,025 ft.
Baldridge and others No. 1 Blakely, C NW NE sec. 5-20-38. Wildcat; T.D. 2,815 ft.; standardizing.
Rushwold Oil Co. No. 1 Carter, C NW NE sec. 30-20-33. Wildcat; T.D. 1,630 ft.; set csg.
Texas Co. No. 2 Sheppard "A," C SW NW sec. 6-26-37. T.D. 3,078 ft.; set packer at 2,988 ft.; flowed 40 bbls. fluid daily.
Maxwell, Crandall & Osmond No. 1 Lane-State, C SW NW sec. 32-10-34. Wildcat; drlg. 2,860 ft.
Maljamar O. & G. Co. No. 7 Baish, C SE NW sec. 21-17-32. Drlg. 2,300 ft.

Continental Oil Co. No. 1 Rex William "A," C SW SW sec. 27-23-35. Wildcat; drlg. 1,545 ft.
Texas Co. No. 1 Young, SE cor. sec. 5-24-37. T.D. 3,647 ft.; flowed 70 bbls. in 9 hrs.
Texas Co. No. 1 Black, C SW NW sec. 21-24-37. Drlg. 2,860 ft.
Magnolia Pet. Co. No. 3 Carson, C SW SW sec. 28-21-37. Drlg. 3,200 ft.
Continental Oil Co. No. 1 Eaves "B," C SW NE sec. 30-36-37. Drlg. 2,705 ft.
Tide Water Oil Co. No. 1 Coates "B," C NW NW sec. 21-25-37. Drlg. 3,050 ft.
Amon G. Carter No. 2 Elliott, C NE NW sec. 22-22-37. Drlg. 690 ft.
Magnolia Pet. Co. No. 1 State "G," NW NW NE sec. 24-17-34. T.D. 1,900 ft.; W.O.C.
Empire O. & R. Co. and Repollo Oil Co. No. 1 Brunson, NW NW SE sec. 4-22-37. T.D. 1,320 ft.; U.R.
Anderson-Prichard Oil Corp. No. 2 Carlson, C SW NW sec. 21-25-37. Drlg. 1,165 ft.
Shell Pet. Corp. No. 1 State "T," C SE NE sec. 34-20-35. Wildcat; moving in material.
Getty Oil Co. No. 2 Hardy, C SW SE sec. 20-21-37. Rig.
Texas Co. No. 1 V. M. Henderson, SE SE NE sec. 30-21-37. Bldg. rig.
Getty Oil Co. No. 1 Etz, C NE NE sec. 12-21-32. Wildcat; spudded.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,702 ft.; S.D.
Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. S.D. 700 ft.

De Baca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

Roosevelt County

Maxwell, Crandall & Osmond No. 1 Williamson, C NW NW sec. 7-8s-36e. Wildcat; drlg. 2,375 ft.
Claudel Development Co. No. 2 Wilmes, C SE NE sec. 17-2s-30e. Wildcat; drlg. 740 ft.
Wirt Franklin and Flynn, Welch & Yates No. 1 Catts, C NW NW sec. 28-3n-30e. Drlg. 2,958 ft.

McKinley County

Claude Walker No. 2 fee, sec. 20-20n-9w. Drlg. at 100 ft.
Dave Stacey No. 1 Tee, C NW sec. 28-20-9w. Drlg. 90 ft.

Union County

Superior Oil Corp. and Olson Drlg. Co. No. 1 J. H. Zurich, SE SW sec. 2-21-34e. T.D. 2,925 ft.; in granite; S.D.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 2,700 ft.; S. carbon dioxide gas.

McKinley County

Three dry holes were completed in the Red Mountain district. Claude Walker No. 4 fee, SW SE section 20-20n-9w, was abandoned at 505 feet. Seward and others No. 1 fee, SE SE NE section 20-20n-9w, was abandoned at 640 feet. Foster & Clark No. 2 fee, NW NE NE section 29-20n-9w, was abandoned at 530 feet.

Al Gibbons No. 2 fee, NW SW NE sec. 28-20n-9w. Drlg. sh. 425 ft.
Dave Stacey No. 1 Patd., C NW sec. 28-20n-9w. Drlg. 180 ft.
S. Bouton, SEL NW NE sec. 4-14n-10w. S.D. 1,490 ft.
Wm. Forth No. 5 fee, NW NW NE sec. 29-20n-9w. T.D. 445 ft. in sh.; W.O. csg.
Claude Walker No. 5 fee, SW SE sec. 20-20n-9w. Spdg. (first report.)

San Juan County

Continental Oil Co. had a good completion in an old well drilled deeper in its No. 31 Tribal, SE SW NE section 2-29-19w, on the Rattlesnake dome. It was originally completed 6 years ago in the Dakota at 721-29 feet for 124 bbls. first 24 hours. It was deepened to 847 feet and completed in the Lower Dakota for 230 bbls. initial with no water. It is rigging up to deepen its No. 34 which was completed in 1934 at 740 feet for 40 bbls.

The Kutz Canon Oil & Gas Co. No. 1 Day, SW cor. section 20-28-10w, which was intended as a test to the Mesa Verde, plugged back from 4,400 feet to 2,110 feet and was completed as a gas well in the Picture Cliff for 300,000 feet. It began spudding early in 1928 and has been on top of a sand in the Mesa Verde for more than a year with a showing of oil and gas, but was unable to complete on account of junk in the hole.

R. R. Burke No. 2 Govt., NW NW NE sec. 18-21n-13w. Drlg. 297 ft. sh.; 19¾-in. at 30 ft.; wtr. at 230 ft.
Continental Oil Co. No. 34 Tribal, C SW SW sec. 2-29n-19w. O.W.D.D. R.U. at 740 ft. (first report.)
Angel Peak Oil Co. No. 7 Govt., Lot 2, sec. 11-28-11w. Drlg. 1,005 ft.
Jack Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,465 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs ranch, SW NE NE sec. 22-12n-22e. T.D. 4,150 ft.; U.R. 6⅝-in. at 4,130 ft.
S. W. Pressey et al No. 1 Faulkner, NE NE NE sec. 25-

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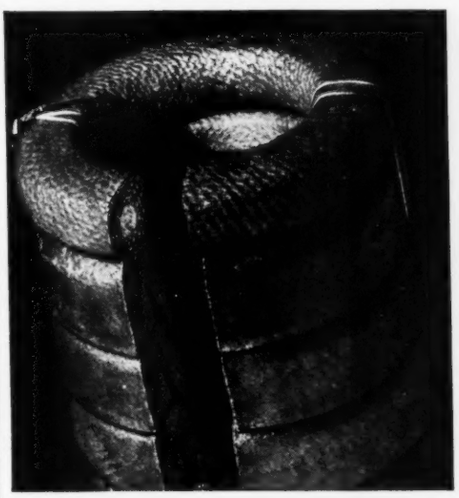

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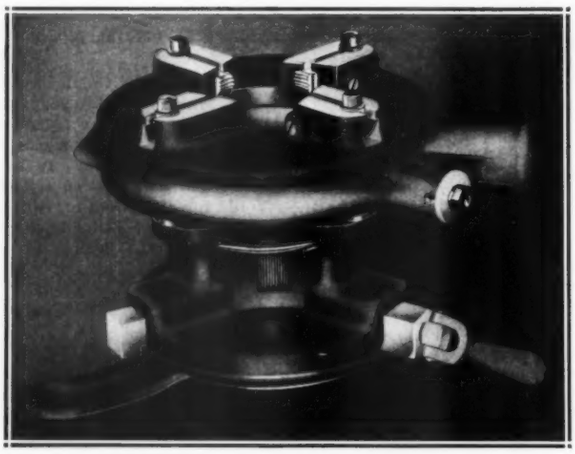

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COLORADO

A change in the policy of some of the major companies holding large blocks of leases in eastern Colorado toward the financing of wildcat wells may go into effect early in 1937 if the directors of these companies approve of suggestions laid before them in connection with the making up of their budgets for next year's drilling campaign. Approximately 4,000,000 acres of leases are held by the majors in the eastern part of the state and these call for the payment of annual rentals of about $1,500,000. This is rather a heavy burden for the companies to carry year after year without a better idea of the possibilities of discovering oil in that area than they now possess. It is becoming more evident that until considerable drilling takes place that there will be very little to be added to present knowledge of subsurface geology. Even if a number of wildcats are put down and the logs do not become available to others the knowledge of conditions will remain very limited in extent.

Up to the present time the tendency of the companies has been to go it alone in financing deep tests or join with one or two close associates and the rule has been to observe as much secrecy as possible regarding the formations explored. In some instances several important tests have been projected but failed to materialize because local executives who desired to join in contributing to the cost were overruled when the proposals reached the powers who make the final decision. If these wells had been drilled at the strategic locations spotted and their logs made available to others, the sum total of the knowledge gained would have been considerable.

It was estimated that more than $18,000,000 was expended in southeastern New Mexico in geological work, leasing and wildcatting before the first pool was opened. In many instances several companies contributed to the cost of each exploratory well. There was a free exchange of information and gradually the promising areas became outlined and then the major pools were discovered. It is now believed that the oil companies are beginning to shape a similar policy for eastern Colorado and that requests of officials in charge of exploration to be allowed more leeway in the matter of contributing to the cost of important tests for the geological information to be obtained will be given more favorable consideration. At least, the proposal has been made to the directors of several companies in connection with their budgets for next year. If the plan goes into operation the fate of eastern Colorado will be known much sooner than is otherwise possible.

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. S.D. 4,368 ft. for 4-in. D.P.

Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. S.D. 4,267 ft.

Archuleta County

Cortez Oil Co. No. 1-A Crowley, 600 ft. N of S line and 200 ft. E of W line, NE NE sec. 2-32n-2e. S.D. 100 ft.

Maryott Drlg. Co. No. 1 Hollywood, SE SE SE sec. 15-34n-1w. S.D. 625 ft.

Oil City Pet. Co. No. 1-A Garrott, SW NE NW sec. 25-32n-2e. S.D. after P.B. from 1,515 ft. to O.S. at 970 ft.

Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 50 (SW SE SW) sec. 24-33n-2e. Landed 6¼-in. at 1,185 ft.; installing calf wheel.

H. L. Hendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. S.D. 1,167 ft.

Sharp et al No. 1 Walcott, C S½ SE sec. 34-33n-2e. S.D. 250 ft.

Boulder County

An interesting well is being drilled in the old Boulder field in Baker and others No. 3 McKenzie, only 500 feet east and a little south of No. 2 McKenzie, the discovery well, which started Colorado's biggest oil boom in 1901. In August, 1901, Isaac Canfield, who came from the Pennsylvania fields and was identified with the discovery of the Florence field, the second pool to be opened in the United States, with some of his associates, operating as the Boulder Oil Co., found oil in their No. 1 McKenzie at 2,530 feet. The tools were lost and the hole was abandoned. The rig was then skidded and No. 2 McKenzie was drilled. It was a 10-bbl. pumper at 2,580 feet, total depth. The oil, testing 42.5 gravity, was struck at 2,537 feet. No. 2 McKenzie was pumped at regular intervals up to about six months ago when the equipment showed the effect of disintegration and gave out. The old field had some flowing wells, but at present there are only

9 or 10 wells being pumped. At that time stock selling was more important in the eyes of some of the operators than oil and wells were shot in some instances with as much as 500 pounds of dynamite in the hope of making a spectacular show and heavy charges were believed afterwards to have been the principal reason for the failure of the pool to come up to expectations.

Baker et al No. 3 McKenzie, NW NE NW sec. 21-1n-70w. Bldg. 1,369 ft. (first report).
Boulder Prod. Dev. Co. No. 2 Maxwell, NW NW NE sec. 24-1n-71. Drlg. 2,427 ft.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69. O.W.D.D.; drlg. 3,150 ft.; S.G.; object Dakota at 3,900 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. S.D. 2,700 ft.

Kiowa County

Core-drilling crew of the Continental Oil Co., which was reported two weeks ago to have established headquarters at Lamar, is working in the territory to the northeast of Eads, instead of core-drilling the Cottonwood structure as stated at the time.

Morgan Flynn and others test on the Nee-No-She block in Kiowa County, is not yet an officially released location, pending the completion of some of the details, but it is expected it will be spotted in the C NW SE section 6-20s-47w, and that it will get under way at an early date. It will be drilled by the Olson Drilling Co., which will move in the rig used in drilling the Indian Territory test on the Hyde block in Washington County.

Gulf Oil Corp. No. 1 Riser-Union Pacific, C SW NE sec. 1-17s-50w. Drlg. 2,740 ft.

LaPlata County

Detroit Oil Association No. 1, NW SW sec. 9-35n-12w. Drlg. 3,170 ft.
McGarr Pet. Co. No. 1 Pinon Mesa Land Co., CSL NE NE sec. 34-33n-12w. Cmtd. 6¼-in. at 9,450 ft.; D.D. to 3,680 ft.; S.D.

Larimer County

Continental Oil Co. No. 8 Buckeye-U.P., C NE SW sec. 1-10s-68. T.D. 4,992 ft.; P.B. to Muddy sd.; pulled tubing and circulating with oil.

Las Animas County

Garcia Corp. No. 1 McClung, NE NW SE sec. 19-33s-61. Loc.; getting titles in shape.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17-62. T.D. 2,096 ft.; drlg. up bailer.

Moffat County

The Mountain Fuel Supply Co. No. 1 Carl Allen, NE SW SE section 32-12n-97, the discovery well in the lower Wasatch formation of Tertiary age on the Powder Wash structure, officially gauged 47½ bbls. per hour through the 2½-inch tubing with 1,400 pounds back pressure on the casing, with 5,000,000 feet of gas. This is the first major discovery in rocks of Tertiary age in the entire Rocky Mountain area. The oil tests 39.9 gravity and congeals at around 68 degrees. Location has been made for its No. 1 Hal Stewart, half a mile to the west of No. 1 Allen. The structure has about 2,000 acres inside the known closure of 75 feet. The only other well drilled on the structure was No. 1 Musser, a gasser at 2,150 feet.

Mountain Fuel Supply Co. No. 1 Stewart, C SW SW sec. 32-12n-97w. M.I.M. (first report).
Mountain Fuel Supply Co. No. 1 Kuykendall, NE NE SE sec. 22-12n-100. T.D. 2,790 ft.; cmtg. off W. sd.
Morapas Pet. Co. No. 1 Cole, C SW SE sec. 1-3n-92. Rig up; bldg. winter camp.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,718 ft.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. S.D. 3,960 ft.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. Drlg. 2,780 ft.; 10¾-in. at 2,750 ft.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Cg. 5,385 ft.

Pueblo County

Phillips Pet. Co. No. 1 Andover-Century, NE SW NW sec. 26-18s-65. S.D. 1,453 ft. for parts; top Dakota 1,449 ft.

Routt County

Mid-Colo Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Weld County

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. Drlg. 6,921 ft. gr. sh.; Dakota at 6,730-6,836 ft.

WYOMING

Albany County

California Co. No. 5 Holst, SE NE SE sec. 13-17n-77. Drlg. 1,845 ft.
Hal Blakeman No. 1 Chapple, C NE NW sec. 31-21-76. Drlg. 1,660 ft.
California Co. No. 1 Bath, NW NW SW sec. 4-16n-75. Drlg. 3,035 ft.
California Co. No. 6 Holst, NW NE SE sec. 13-17n-77. R.U.

Big Horn County

Stock Oil Co. No. 1 Allen, Lot 52, sec. 32-46n-97. T.D. 3,825 ft.; on fire.
Stock Oil Co. No. 1-B Allen, Lot 52, sec. 32-46n-97. Drlg. 2,995 ft. in r.b.
Ohio Oil Co. No. 1 Wiley, C NE NW sec. 25-56n-97. Drlg. 4,819 ft.
Ohio Oil Co. No. 2 Smith, CWL NE SE sec. 32-56-97. T.D. 4,191 ft.; D.P. frozen on bottom.
Ohio Oil Co. No. 1 State, NE cor. Lot 38, sec. 36-46n-97. Drlg. 2,142 ft.
Taylor Oil Co. No. 1 Robinson, SW SW NW sec. 34-56n-97. S.D. 2,860 (cor.) ft.
Peay Oil Co. No. 1 Denio Hr., 43-C, sec. 15-55n-87w. T.D. 3,998 ft.; pulling cg. at 3,930 ft.
Stock Oil Co. No. 1 Griffin, Lot 60, sec. 4-55n-97. T.D. 4,200 ft.; csg. stuck at 3,610 ft.
Peter Evanoff et al No. 1 McAllister, NW NE SE sec. 9-55n-87. S.D. 3,015 ft.; will run 8⅝-in. and go to Madison.
J. W. Bales No. 1 Parker, C SW SW sec. 23-49n-89w. Resumed; drlg. 950 ft.

Carbon County

Ohio Oil Co. No. 7 H.&C., C NW sec. 2-19n-78. O.W.D.D.; R.U. at 3,850 ft. (first report).
Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78. Drlg. 1,815 ft. in Morrison.
General Pet. Corp. No. 1 Union Pacific, SW NW sec. 19-83w. Drlg. 5,400 ft. in base of Morrison.
Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26-89w. Drlg. 5,827 ft. in dry L.; feeling for the Tensleep.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. S.D. 3,050 ft.; may install rotary.

Campbell County

G. J. Shearin et al No. 1 Rhodes, NE SE SW sec. 21-49n-74. S.D. 191 ft.

Fremont County

C. E. Nelson No. 2 Enos, SW NE SW sec. 27-3n-1w. Drlg. 580 ft.
Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. Drlg. 2,890 ft.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. T.D. 7,293 ft.; fshg. for bailer.

Goshen County

Ohio Oil Co. No. 1 Waggoner, C NE NE sec. 14-28-63w. Drlg. 2,775 ft. below r.b.

Hot Springs County

Empire State Oil Co. No. 1 Larson, sec. 33-44n-93. Drlg. 1,815 ft.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. T.D. 7,052 ft.; rng. 11¾-in. to bottom.

Lincoln County

Place Oil Co. No. 36, SE sec. 9-26n-113. S.D. 30 ft.
Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-36n-113w. S.D. 1,020 ft.

Natrona County

Western Producers, Inc., No. 1 Govt., NW SW SE sec. 5-39n-78. Drlg. 418 ft.

Niobrara County

Three wells were completed in the Lance Creek area, of which one, a mile south of production, was dry and abandoned.

The Ohio Oil Co. No. 6 Carrie Putnam, C NW NW section 4-35n-65w, was completed at 4,019 feet in the basal Sundance and flowed 799 bbls. the first day. The 7-inch was cemented at 4,006 feet. Elevation is 4,406 feet. It is a south offset to No. 4 Putnam which made 3,278 bbls. initially, and an east offset to No. 1 Lamb, which was completed for 2,956 bbls. The hole is being enlarged to 11 inches with wall scraper in an effort to increase the production.

The Ohio Oil Co. No. 4 Agnes Rohlff, 100 feet south of C SW NE section 32-36n-65, was a completion in the basal Sundance at a total depth of 3,969 feet and made 40 bbls. the first 24 hours. It is an outside well on the north and apparently is getting close to the edge. It had the basal Sundance at 3,864-3,964 feet and cemented the 7-inch at 3,867 feet. It showed 10 bbls. of water with the oil. Hole is being enlarged to 11 inches with wall scraper in an effort to increase production.

The Adams Louisiana-Bay-Elwell No. 1 Spaugh, C NW NE section 18-35n-65, a mile south of the nearest Lance Creek producer, was abandoned at 4,615 feet. It ran about 750 feet low and apparently is not on a separate high as at first believed. The top of the third Sundance was at 4,532 feet. It had sand at 4,546-84 feet with water at 4,564-84 feet. The top of the Morrison was at 4,186 feet and top of the Lakota at 3,988 feet. It had a good show of gas in the Frontier at 2,720-35 feet. Elevation is 4,521 feet.

One new location was released in the Ohio Oil Co. No. 9 Elizabeth Lamb.

Argo Oil Co. No. 8 Elliott, C NW SE sec. 5-35n-65. Drlg. 3,750 ft.
Bay-Elwell No. 1 Joss, CSE SE NW sec. 1-34n-66w. Drlg. 2,100 ft.
Continental Oil Co. No. 2 Schuricht, SE SW NE sec. 6-35n-65. T.D. 4,068 ft.; recmtd. back to 4,008 ft.
Continental Oil Co. No. 5-A Schuricht, C NW SW sec. 5-35n-65w. Dk.; W.O. tools.
Continental Oil Co. No. 2-A Dielman, NW NE NE sec. 7-35n-65. Cg. 3,831 ft. sdy. sh.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. T.D. 3,951 ft.; sidetracked D.P. and drlg. ahead.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 970 ft.
J. M. Huber Corp. No. 2 Jose, NE NE SW sec. 6-35n-65. Drlg. 3,150 ft.
Ohio Oil Co. No. 5 Leo OPC-16, NW NW SW sec. 36-36n-65w. Dk.; M.I.M.
Ohio Oil Co. No. 9 Lamb, C SE NE sec. 5-35n-65w. Cellar (first report).
Riggs Oil Co. No. 2 Spaugh, SE SW SW sec. 32-34n-65w. S.D. 1,092 ft. for winter.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. T.D. 940 ft.; fshg. U.R. lug.

Park County

The Resolute Oil Co. No. 1 State, in the Badger Basin field, was a near completion and preparing to test when the rig caught fire and burned down. The Frontier sand at 8,440-58 feet had been shot and hole cleaned. Tester was being run when the fire broke out. There is a thick section of the Frontier remaining to be drilled.

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. Drlg. 3,850 ft. in top of Morrison.
Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. T.D. 8,455 ft.; rig burned down.

Platte County

Dividend O. & R. Co., Inc., No. 1, CSL NW SW sec. 17-24n-66. Drlg. 980 ft.

Sublet County

California Pet. Corp. No. 4-B, CWL NE NW sec. 34-27n-113. T.D. 745 ft.; cmtd. 10¾-in. at 389 ft.; rng. 6⅝-in. to 730 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55-85. Drlg. 3,200 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Cooper, C NW NE sec. 15-16n-104. Cmtd. 8⅝-in. on bottom at 2,178 ft.

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. S.D. 1,850 ft.; unable to make W.S.O.

Washakie County

Arlton & Doyle No. 1 Govt., SW SW SE sec. 29-48-91. Sulfur wtr. 1,353-56 ft.
Woods-Callahan Oil Co., Ltd., No. 1 Keyes, SE SE NW sec. 25-48n-91. R.U.C.T.
Bruce C. Teeters No. 4 Govt., NW SW NW sec. 31-48n-90w. Drlg. 1,530 ft.
Calhoun & Jeffries No. 1 Govt., SW NW SW sec. 30-48n-90w. Drlg. 2,212 ft.
Christensen & Thorne No. 3 Govt., NW SW SW sec. 31-48n-90w. Drlg. 1,320 ft.
Wyoming O. & R. Co. No. 5 Govt., SW NW NW sec. 31-48n-90. Drlg. 1,260 ft. (first report).

Weston County

Three wells were completed in the Osage field. Charles Stough No. 5, C SE NW section 4-46-63, pumped 7 bbls. initially at 281 feet. R. L. Rose No. 11, CSL SW SE section 8-46-63, made 5 bbls. from shale at 315 feet. A. E. Jones No. 14, NW SW NE section 21-46-63, pumped 20 bbls. initially from sand at 465-475 feet.

H. D. Wiltse No. 11, CWL NE NW sec. 17-46-63. Drlg. 350 ft.
Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. T.D. 2,700 ft.; P.B. to 2,345 ft. to S.O. bottom wtr.; prep. to acidize.

MONTANA

Crude oil production and oil in storage in Montana in October showed comparatively little change from the preceding month. Total production was 529,445 bbls., a decrease of 6,312 bbls., compared with September. Storage increased 56,154 bbls. to a total of 1,076,086 bbls. at the end of October.

Montana gasoline sales in October were 11,514,775 gallons, which compares with 11,870,186 gallons in September, a decrease of 355,411 gallons. Gasoline refined in the state amounted to 6,733,033 gallons in October as against 6,924,685 gallons in September and imports were 4,781,742 gallons in October and 4,945,501 in September.

J. W. Schmidt, of Anoka, Mont., who is promoting a federal loan of $30,000,000 for a gas pipe line project from eastern Montana to the St. Paul and Minneapolis area, is quoted by O. I. DeSchon, editor of the Montana Oil Journal, as saying that the recent New Deal victory was favorable to the carrying out of the project. It is hoped to obtain a government loan. Early announcement will be made of drilling plans to build up a sufficient reserve for the undertaking, if approved.

Big Horn County

Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. Resumed with cable tools; drlg. 3,670 ft.

Cascade County

C. Leonard Smith No. 1-A Smith-Schwingle, NE NE SW sec. 14-22n-2e. Drlg. 1,760 ft.

Carbon County

East Bridge O. & G. Co. No. 1 CSL SE SE sec. 23-6n-23e. Drlg. 1,510 ft.
Ohio Oil Co. No. 1 Northern Pacific. T.D. 5,772 ft.; W.O. tester parts.

(Continued on Page 84)

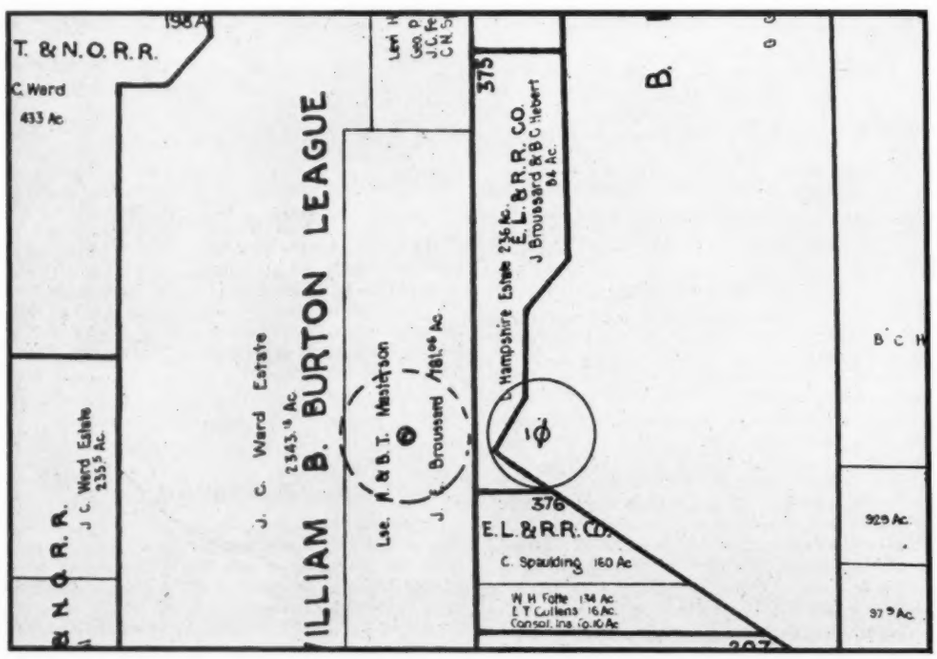
Texas and Louisiana Gulf

By
F. L. SINGLETON

LABELLE PROSPECT CENTERS INTEREST; EXTEND ANAHUAC

HOUSTON, Tex., Dec. 7. — Interest along the Gulf Coast was centered on the LaBelle Prospect in central Jefferson County where preparations were being made by Sun Oil Co. to run casing to test No. 2 Hebert and Broussard which is bottomed in 11 feet of oil sand at 8,217 feet. The sand was topped at 8,206 feet and casing is being cemented without making a drill stem test.

This is the second well to be drilled by the company. The first test, No. 1 Hebert and Broussard, located approximately 2,000 feet to the east in the B. Blackburn Survey, was abandoned several months ago at a depth of 9,848 feet. Several sands below 8,200 feet were encountered in this well, the deepest being at 9,800 feet, but due to mechanical trouble the operators were unable to make a test. Based on geological markers, No. 2 Hebert and Broussard is about normal with the first well and it is expected to be drilled deeper should it fail to produce at its present depth.



LaBelle Prospect, Jefferson County, showing location of Sun Oil Co. No. 2 Hebert and Broussard which is preparing to test a sand bottomed at 8,217 feet.—(W. W. Zingery, Maps, Houston)

Gulf Oil Corp. No. 1 Pommer extended the Anahuac field in Chambers County 1,800 feet to the east when it flowed 30 bbls. per hour through a quarter-inch choke from a depth of 7,127 feet. The sand was topped at 7,120 feet and 7-inch casing was cemented at 7,093 feet. Location is in section 48 of the H.&T.C. Survey. In the northern part of the field, Humble Oil & Refining Co. No. 6-B White flowed 13 bbls. per hour from a depth of 7,129 feet.

Amelia Field

In the Amelia field, Jefferson County, Humble Oil & Refining Co. No. 1 Phelan perforated casing from 6,775-78 feet, and flowed 420 bbls. per day through a quarter-inch choke with tubing pressure 1,450 pounds and casing pressure 1,775 pounds. It extends the field 1,000 feet to the south. In the West Beaumont field, Stanolind Oil & Gas Co. No. 1 Sargl, an east offset to McCarthy No. 2-A Longe, cored 5 feet of oil sand to a depth of 6,105 feet and is running casing to test, following the running of an electrical coring device. To the west in the A. Houston Survey, Texas Co. has abandoned No. 1 Pansy Yount at 8,501 feet. To the southwest in the Nome field, Sun Oil Co. No. 3 Paggi, located in the J. W. Kirby Survey, is bottomed in oil sand at 6,052 feet, with 7-inch casing cemented at 6,005 feet.

Three wells were scheduled to be tested at the Van Vleck field, Matagorda County, by Skelly Oil Co.: No. 11-B Cobb cored oil sand in the 8,200-foot horizon from 8,241-48 feet, the total depth, and an electrical coring test is being made. No. 12-B Cobb was tested through perforated casing at 7,501-08 feet and flowed 26 bbls. of fluid per hour of which 10 to 26 per cent was salt water and cement is being squeezed into the perforations for another test. No. 13-B Cobb is bottomed at 7,493 feet and is being washed in after perforations had been made in the casing at 7,481-87½ feet.

Sun Oil Co. No. 1 Lauter, located on the south flank of the Clay Creek field in Washington County, is drilling ahead after a drill stem test from 7,413-74 feet showed 270 feet of drilling mud and 90 feet of oil with no gas or working pressure. By closing in the well and letting the pressure build up the well flowed 35 bbls. of pipe line oil in 48 hours through open 2½-inch tubing.

Although no gauge has been reported, Josey & Bruton No. 1 Lambert, located 1¼ miles west of the Quintana-O'Connor field in Refugio County, has been completed for a good producer. The hole is bottomed at 5,903 feet and the well was completed in the Frio sand cored from 5,880-5,903 feet. Location is in the O'Connor-Swisher Survey.

Hardin County

Preparations were being made by the Republic Production Co. and Houston Oil Co. to test their No. 3 fee, located at the Silsbee Prospect in Hardin County. On a drill stem test from 6,820-62 feet the well tested 450 pounds of pressure and from 6,900-43 feet it showed 400 pounds. Oil sand was cored from 6,973-79 feet and the operators will probably run casing after making an electrical coring test of the hole. This well is southwest of the operators' No. 1 fee, which blew out, cratered and ran wild for several weeks before it was finally killed by a "relief" well, No. 2 Brooks, which has been cemented back to 5,714 feet preparatory to sidetracking after it tested salt water on a 15-minute drill stem test from 6,963-89 feet. The two wells have cored the same horizon from which the first well blew out, and they have failed so far to give any encouragement to the area.

Sun Oil Co. No. 2 White, located approximately 2½ miles southwest of the discovery well of the Seabreeze Prospect, Chambers County, is waiting on cement after a squeeze-out cement job had been made through the casing from 3,392-3,422 feet, which was found to be split when the company tested the casing preparatory to drilling plug at 8,715 feet to test a section of sand between 8,715 and 8,869 feet, the total depth. Sun Oil Co. No. 1 Acom, in the T.&N.O. Survey, flowed 44 bbls. of oil in 24 hours through a quarter-inch choke, with tubing pressure 3,100 pounds and casing pressure 3,000 pounds.

At the Hitchcock Prospect, Galveston County, Shell Petroleum Corp. No. 1 Maco Stewart has been plugged back to 5,170 feet and tubing is being run for a test after a 10-minute drill stem test from 5,120-30 feet showed 350 pounds of working pressure and 270 feet of gas-cut mud. The hole was originally drilled to 10,460 feet, where it was lost due to heaving shale trouble.

Another wildcat for the Sheldon Prospect, Harris County is scheduled to be drilled by McSpaddin & Ryan, who are reported to have purchased a block of acreage in that area from A. C. Hill, who recently drilled two dry holes to the north of the purchased acreage. The proposed test is scheduled to be drilled to 6,500 feet.

Louisiana Coast

Developments along the Louisiana Coast were routine. Of the 13 completions reported, six were dry holes and the balance were within proven areas.

On the west flank of the Jennings field, Acadia Parish, Superior Oil Producing Co. has two wells nearing the pay and are being watched with interest. No. 1 Jennings Heywood in section 41 is drilling shale below 6,100 feet and is reported to be running higher on the Discorbis marker than the discovery well. To the south in section 42, No. 1 Crowley is bottomed at 6,444 feet and a protection string of casing is being cemented on bottom.

Two completions were reported for the Gillis field in Calcasieu Parish, Union Sulphur Co. No. 10 Barbe in section 1-9s-8w, was tested through perforated casing from 6,702-11 feet and flowed 510 bbls. per day through a 24/64-inch choke. Same company's No. 3 Kaufman flowed 190 bbls. per day through perforated casing from 7,068-75 feet.

On the east flank of the New Iberia field, Iberia Parish, Texas Co. No. 2-B Hanzen extended production 800 feet when it flowed 639 bbls. per day through a quarter-inch choke through perforated casing from 4,658-4,705 feet.

fining Co. have rigged up for No. 19 Cameron Meadows.

(Continued on Page 80)

East and East Central Texas

By
L. E. BREDBERG

DEMAND FOR TALCO CRUDE REFLECTED IN FIELD WORK

DALLAS, Tex., Dec. 7.—The demand for the low gravity viscous Talco crude is reflected in the amount of drilling taking place and the number of locations and completions reported every week in the field. There are now 52 activities in the field, 30 of which are drilling wells and 22 locations and rigs up for others. This week 11 tests were completed in the field, only one of which was dry, and this being on the southwest side of the field. The Neversuch Oil Co. completed this "duster" on the F. A. Jones lands in the O. James Survey, Franklin County, about 1,000 feet southeast of a producer drilled by the same company some time ago. Total depth of the test is 4,348 feet and elevation is 350 feet.

The previous per well allowable of the Talco field was 75 bbls., but the Texas Railroad Commission raised this amount by 10 bbls. for the month of December. On December 1 there were 139 producers in the field.

The Sulphur Bluff pool, 18 miles southwest of the Talco field, in Hopkins County, received only one location this week and no wells were completed in the pool. Hager and others, discoverers of the field, staked location for No. 6 Worsham, in the Wetmore Survey, this week. Completion of the 18-mile pipe line from this pool to connect with the Humble Pipe Line Co.'s line at Talco, is expected soon. This line will be the first outlet for the Sulphur Bluff pool. Humble will deliver the oil, on a common carrier basis, from the Talco pool to East Texas where owners of the 18-mile line have a trunk line leading to the Gulf Coast. However, most of the Sulphur Bluff crude is expected to be refined in the East Texas field, at least for some time.

Wildcatting

Four wildcats were abandoned in the East Texas general area in the past week, the four tests being located in as many counties and well scattered throughout the territory from Freestone on the south to Fannin on the north. The Fannin "duster" was drilled by L. P. Kean on the William Kelly farm in the W. Kell Survey, 3 miles southwest of Ladonia. It was given up at a total depth of 2,902 feet. The Georgetown lime was topped at 2,610 feet and elevation is 654 feet.

The Freestone abandonment was made by the Velvet Oil Co. on the Beauchamp farm in the H. Shepard Survey, 2 miles north of Fairfield. Total depth is 4,403 feet and elevation is 374 feet.

William McDougal and others abandoned their Woodbine sand test on the E. Price farm, in the M. Mathews Survey, 4 miles south of Trinidad in Henderson County, at a total depth of 4,120 feet. It topped the Woodbine sand at 3,841 feet, and has an elevation of 294 feet.

B. L. Watson abandoned a failure in the northeast corner of Upshur County this week at a total depth of 3,890 feet. Elevation is 241 feet. It is located in the D. Cannon Survey.

This was the greatest crop of wildcat failures recorded in the district in a number of months, and while all of these were being written off the drilling report only one location was reported for the district. Everets Drilling Co. is preparing to sink a test 6½ miles southeast of Fairfield in Freestone County to a reported depth of 5,000 feet. Same is located on the O. W. Killiam farm in the J. Robins Survey.

A deep test for the district is preparing to be drilled by A. H. Grider of Mexia and associates. Same is to be sunk to 6,100 feet in quest of Trinity production on a Pure Oil Co. farmed-out lease on the W. B. Kendrick farm, P. Varella Survey, in the Mexia field in Limestone County. Three deep tests have been put down in this area, all of them making some oil, but none of them proving a commercial producer. This new test will be about 1¾ miles south of the deep tests, and an interesting one for the fault line and district.

A wildcat in Cherokee County now appearing as a failure is that of the General Crude Oil Co. on the L. S. Stockton farm, 4 miles east of Mt. Selman, and the S. Jarboe Survey. Elevation is 475 feet. It cored 4 feet of water sand in coring to 4,396 feet and is now running Schlumberger Some sand cored had a stain and odor of oil, but the latter cored sand showed water.

About the most important wildcat now drilling in the district is that of the Humble Oil & Refining Co. and Tide Water Oil Co. on the Easter farm in the R. Hotchkiss Survey, 6 miles east of the town of Emory in eastern Rains County. The test is now coring ahead in shale around 6,020 feet with no oil or gas showings. Its slated depth is 7,500 feet in quest of Trinity production.

Seeking the Glen Rose Pay

The Rodessa pay zone of the Glen Rose section is the goal of two formerly abandoned wildcat tests in Rusk County. Ben E. Lamb No. 1 H. Leith, in the J. L. Dooley Survey, 2½ miles east of Pyrtle, which previously had a good showing of oil in the Woodbine, is one of the tests to be deepened, and the other is that of J. W. Shipman on the J. W. Burton farm, in the J. J. Y'Barbo Survey, 2½ miles northeast of Henderson. Both are in Rusk County. Total depth of the former is 4,740 feet and the latter was 3,597 feet. These will be two exceptionally interesting tests and will be closely watched for developments as geophysical work has been carried on down from the Rodessa field in Louisiana and Cass County, Texas, southwest into this part of Rusk County, companies and independents purchasing a large amount of acreage in this new play.

Rusk Pool

The Rusk pool, 5½ miles southwest of Rusk in Cherokee County, opened about 2½ years ago, had its No. 1 and 3 New Birmingham Development Co. wells tested by the Railroad Commission this week and the No. 1 well showed a daily potential of 93 bbls. of net oil (showing 56½ per cent water on test) and the No. 2 well tests 143 bbls. of net oil (showing 41½ per cent water on test) after two-day tests were made. These wells were drilled by Woods, Wolfe and others, several dry holes having been drilled in the area in an effort to extend the pool, but to no avail so far.

East Texas Field

There were 38 locations staked in the East Texas field this week and 48 wells were completed, all producers, of which five were pumpers and one was a swabber.

EAST TEXAS COMPLETIONS

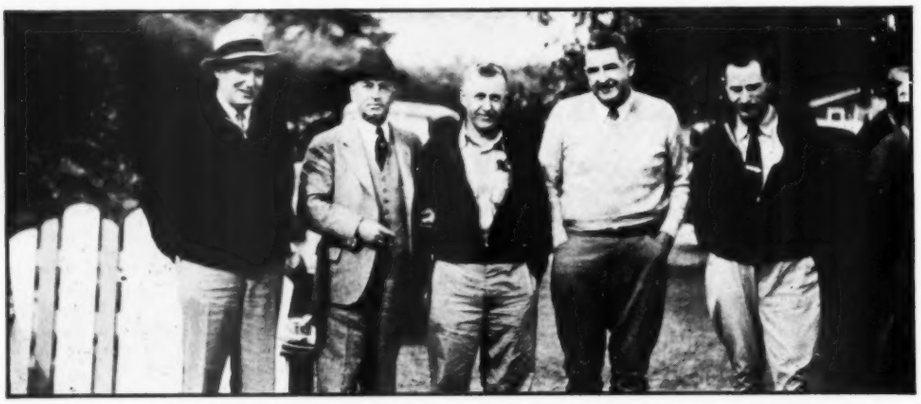
Gregg County

Atlantic Refining Co. No. 15 Lee, 3,633-82 feet, 108 bbls. per hour. Humble Oil & Refining Co. No. 13 Castleberry, 3,448-51 feet, 20 bbls. per hour. Magnolia Petroleum Co. No. 18 Jones, 3,643-65 feet, 21 bbls. in 15 minutes; No. 9 Tate, 3,433-55 feet, 28 bbls. in 15 minutes. Selby Oil & Gas Co. No. 15-C Snavely, 3,576-86 feet, 80 bbls. per hour. Shell Petroleum Corp. No. 33 Moore, 3,566-70 feet, 21 bbls. in 15 minutes. Sinclair Prairie Oil Co. No. 15-A Aiken, 3,557-3,614 feet, 30 bbls. in 15 minutes; No. 52 Moncrief, 3,565-3,600 feet, 30 bbls. in 15 minutes. Stanolind Oil & Gas Co. No. 16 Fenton, 3,593-3,622 feet, 14 bbls. in 15 minutes.

J. G. Beard No. 6 Elder, 3,524-54 feet, 4 bbls. per hour on swab. Central Commercial Oil Co. No. 9 King, 3,712-13 feet, 23 bbls. in 20 minutes through

When E. N. Wilson, production superintendent for Magnolia Petroleum Co., threw a barbecue in the Longview, Tex., area, recently, this quintette stopped on their way to the "feed" long enough to be portrayed. They are William V. Westerlage, manager Safety Casualty Co., Dallas, Tex.; J. C. Field, annuities and insurance department, Magnolia Petroleum Co.; E. J. Senne, chief safety director, Socony-Vacuum Oil Co., Inc.; J. L. Risinger, manager of the fire and prevention department, Magnolia companies; Seth A. Hensley, safety supervisor, eastern division, Magnolia companies

three-eighths inch choke. Max Ducol No. 2 Church Lot, 3,660-64 feet, 60 bbls. per hour. Gulf Oil Corp. No. 24 Holt, 3,570-92 feet, 60 bbls. per hour. Jones and others No. 6 Crim, 3,690-91 feet, 20 bbls. per hour. Magnolia Petroleum Co. No. 7 Still, 3,531-55 feet, 20 bbls. in six hours on pump. Shell Petroleum Corp. No. 17-A Biven, 3,544-76 feet, 30 bbls. in 30 minutes. Sinclair Prairie Oil Co. No. 24 Lawther, 3,524-28 feet, 15 bbls. in 25 minutes. Sun Oil Co. No. 18 Reese, 3,698-99 feet, 64 bbls. per hour. Tide Water Oil Co. No. 30 Barton, 3,536-54 feet, 10 bbls. in 10 minutes.



A cheerful-looking party are these Magnolia Petroleum Co. and Magnolia Pipe Line Co. superintendents and their guest, including L. A. Hancock, East Texas district, Magnolia Pipe Line Co.; E. J. Senne, chief safety director, Socony-Vacuum Oil Co., Inc.; C. P. Ekas, superintendent of the machine shop at Kilgore; E. N. Wilson, superintendent of production, Longview district, and J. B. Wells, superintendent of production in the Rusk district

Rush County

P. Allen No. 6 Dickerson, 3,525-68 feet, 20 bbls. in six hours on pump. Royal Petroleum Corp. No. 6 Taylor, 3,570-3,620 feet, 20 bbls. in two hours on pump. Tide Water Oil Co. No. 11 Beall, 3,635-41 feet, 60 bbls. per hour. Atlantic Refining Co. No. 15-D Pinkston, 3,604-77 feet, 50 bbls. per hour. T. J. Carter No. 1 Tipps, 3,628-29 feet, 20 bbls. per hour. Chicago Oil Co. No. 5 Alford, 3,572-97 feet, 30 bbls. per hour.

Georgian Corp. No. 2 Wood, 3,802-09 feet, 27 bbls. in six hours on pump. Gulf Oil Corp. No. 9 Alford, 3,779-82 feet, 10 bbls. per hour. Humble Oil & Refining Co. No. 9 Holt, 3,769-3,814 feet, 75 bbls. per hour; No. 61-A Kangerga, 3,680-3,715 feet, 55 bbls. per hour through 1-inch choke. Ohio Oil Co. No. 20 De Guern, 3,640-89 feet, 12 bbls. in 15 minutes. Royal Petroleum Co. No. 2 Dennis, 3,641-82 feet, 14 bbls. in seven hours on pump. Stanolind and Pure Oil Co. No. 64 Siler, 3,614-38 feet, 32 bbls. per hour; No. 70 Siler, 3,574-3,620 feet, 45 bbls. per hour.

Smith County

Sinclair Prairie Oil Co. No. 13-B Jarvis, 3,688-93 feet, 60 bbls. per hour; No. 10 Patterson, 3,678-80 feet, 17 bbls. in 30 minutes. Sun Oil Co. No. 4 Seale, 3,697-98 feet, 20 bbls. per hour.

Upshur County

Barnett Petroleum Corp. No. 3-B Cannon, 3,696-3,700 feet, 30 bbls. per hour. P. Pewitt No. 17 Williford, 3,676-77 feet, 20 bbls. per hour; No. 3 Williford, 3,685-86 feet, 20 bbls. per hour. Rutledge & Boller No. 17 Todd, 3,751-52 feet, 20 bbls. per hour through one-half inch choke. Southland Drilling Co. and United East & West Oil Co. No. 29 O'Byrne, 3,735-50 feet, 40 bbls. per hour. Southland Drilling Co. No. 43 O'Byrne, 3,712-15 feet, 35 bbls. per hour. Vera Oil Co. No. 7 Owens, 3,800-01 feet, 30 bbls. per hour.

MISCELLANEOUS COMPLETIONS IN EAST TEXAS

Anderson County

T. L. Sessions and others No. 1 Hurt Heirs, 4,042 feet, 25 bbls. in 24 hours through one-eighth inch choke.

Titus County

G.M.W. Oil Production Co. No. 2 Cato, 4,370 feet, 30 bbls. per hour, swabbing; No. 4-32 Talco Townsite, 4,370 feet, 30 bbls. per hour, swabbing. W. B. Hinton and others No. 4 Hargraves, 4,342 feet, 18 bbls. per hour. Hollandsworth Drilling Co. No. 6 Morris, 4,372 feet, 107 bbls. in 24 hours, swabbing. Housh and others No. 2 Carr, 4,339 feet, 458 bbls. in 24 hours. Humble Oil & Refining Co. No. 2 Milligan, 4,320 feet, 15 bbls. per hour; No. 1 Monning Dry Goods Co., 4,297 feet, 254 bbls. daily through three-fourths inch choke. Alex McCutchin No. 1 First National Bank, 4,355 feet, 150 bbls. in 24 hours, on pump. Rozell Oil Co. No. 1 Methodist Church, 4,322 feet, 175 bbls. per day on swab.

Fannin County

L. P. Kean No. 1 Kelley, dry and abandoned 2,902 feet, 3 miles southwest of Ladonia. Elevation 654 feet.

Franklin County

Housh and others No. 4 Owings, 4,309 feet, 11 bbls. per hour, flowing. Neversuch Oil Co. No. 1 Jones, 4,348 feet, dry and abandoned. Elevation 350 feet.

Freestone County

Velvet Oil Co. No. 1 Beauchamp, 4,403 feet, dry and abandoned, elevation 374 feet, 2 miles north of Fairfield.

Henderson County

Wm. McDougal and others No. 1 E. Price, dry and abandoned, 4,120 feet. Top Woodbine 3,841 feet, elevation 294 feet, four miles south of Trinidad.

Upshur County

B. L. Watson No. 1 W. O. Irwin, dry and abandoned, 3,890 feet, elevation 241 feet, northeast corner of county.

Gulf Coast Fields

(Continued from Page 78)

At Cameron Meadows in Cameron Parish, Burton Sutton Oil Co. has rigged up for another well following the completion of his No. 15 School Land which was completed at 3,345 feet for an initial production of 100 bbls. per day. The location was No. 17 School Land in section 16, whil in section 21 Magnolia Petroleum Co. and Humble Oil & Re-

10,000-Foot Horizon

Prospects of opening production from the 10,000-foot horizon in the Lafitte field in Jefferson Parish were temporarily delayed as Texas Co. No. 5 Rigolettes, which was originally drilled to a depth of 10,942 feet, sidetracked the hole at 7,906 feet after failing to recover a stuck reamer at 7,087 feet. Sand showing good porosity was recorded on an electrical coring test and the hole was being reamed to run casing when the fishing job occurred. Same company's No. 1 R. C. Milling, in section 20, is drilling in shale below 9,400 feet and should reach the 9,600-foot sand during the week.

Mike Hogg and others No. 1 Laws Realty Co., the discovery well of the Charenton field, St. Mary Parish, which was killed to workover due to salt water intrusion, was cored deeper from its old total depth of 7,210 feet to 7,217 feet and recovered oil sand. A 10-minute drill stem test from 7,198-7,217 feet showed 34 thribbles of oil with 6 thribbles of brackish water. The water, however, is believed to be coming from the casing seat above since no salt water sands were recorded on an electrical coring test. The operators are cementing to shut off the water.

Magnolia Petroleum Co. abandoned two deep tests in Cameron Parish. One was located north of the discovery well of the Big Lake field being No. 1 Raymond Lebau which was quit in salt water sand at 8,313 feet. The discovery well, No. 1 Broussard, was completed for a distillate producer at a plugged back depth of 7,968 feet. No. 1 Lebau is the second dry hole drilled which discourages future development. In the extreme southwestern part of the parish, No. 1 Johnson Bayou located in section 16-15s-14w, has been abandoned at 9,180 feet.

At the Jefferson Island dome, Iberia Parish, Jefferson Lake Oil Co. has abandoned Nos. 411 and 409 Lake Pigneur and has spudded in on No. 413 Lake Pigneur. No. 409 State was quit at 6,947 feet while No. 11 State was abandoned at 4,698 feet.

Tide Water Oil Co. No. 2 Manhattan Fruit Co. located on the Venice dome, Plaquemines Parish, topped the salt at 4,733 feet and is shut down in salt at 4,747 feet. It is 200 feet southeast of No. 1 in section 28-12s-36e.

Two of the district's most interesting wildcats are located in Vermilion Parish and have reached critical depths. On the Abbeville Prospect, Continental Oil Co. No. 1 O. C. Hebert is drilling in shale below 11,702 feet and is only a few feet from where it tried to blow out several weeks ago. To the southeast, Stanolind Oil & Gas Co. No. 1 Stovall is drilling in shale below 8,631 feet with no shows reported.

Eastern Fields

(Continued from Page 60)

the top of the Cow Run sand at 472 feet with 50,000 feet of gas at 478-90 feet.

In Monongalia County, Dunn Mar Oil & Gas Co. completed deepening No. 3 N. Tennant farm in Clay district at 2,973 feet, through the Fifth sand. It gauges 142,000 feet a day from that formation.

In Pleasants County, M. J. McCullough completed a second test on the W. J. McCullough farm in McKim district at 1,582 feet, the Maxon sand. It is a gas well gauging 300,000 feet a day.

In Ritchie County, Oil & Gas Co., on the E. E. Cokely Heirs farm in Union district, has a gasser in the Salt sand at 1,600 feet, gauging 500,000 feet a day. In Grant district, R. C. Jackson, on the J. M. Lewis farm, got Berea sand and a gas well gauging 75,000 feet a day. The total depth was 2,187 feet. In the Murphy district, Byrd Sweeny drilled a test on the J. I. Goff farm through the Berea sand to a depth of 2,307 feet. It was a dry hole. In Grant district, Mellon Brothers deepened their No. 3 on the A. J. Null farm to 2,136 feet and the lower sands were dry and it is being filled back to 1,497 feet to produce the oil.

In Wayne County, C. C. Wolfe completed a test on the Frank Adkins farm in Union district at a depth of 3,240 feet. The Big Lime was at 1,353-1,520 feet; Big Injun 1,535-1,610 feet; Berea 2,184-2,202 feet; Brown shale 2,625-3,220 feet with 212,000 feet of gas at 2,900-3,200 feet.

Oriskany Field

Two operations were completed in the Oriskany field in Kanawha County. In Elk district, United Fuel Gas Co. completed No. 4691 on the G. C. Cavender farm at a depth of 4,922 feet, the Oriskany sand. One hour after shot this well gauged 3,729,000 feet a day.

In Loudin district south of the Coopers Creek field and west of the Campbells Creek field, Godfrey L. Cabot, Inc., drilled a test on the Marmet Coal Co. to a depth of 4,890 feet or through the Oriskany sand. It was dry.

In Elk district, the test of the Columbian Carbon Co., which was showing for a gas well on the Everett Copenhaver farm, has been completed and now gauges 10,000,000 feet a day. No new locations were reported in this field during the week and about nine wells are due in the sand.

Kansas Developments

By
DAL DALRYMPLE

TRAPP POOL EXTENDED; FIVE NEW OIL WELLS IN DISTRICT

Several big wells were completed in the Trapp, Warkentin, Lerado and Wellington pools in Kansas, and several wildcats opened new pools or were giving promise of doing so. One of five big wells in the Trapp area extended that pool one-fourth mile southeast.

Bridgeport Machine Co. and others No. 1 Dreese, C E half NE NE section 2-23-2w, is a new well in the Warkentin area of Harvey County and one of the biggest producers yet completed in that field. It made potential of 4,852 bbls. of oil naturally from Chat at 2,993 feet.

Empire Oil & Refining Co. and Atlantic Refining Co. No. 1 Jordan, SW SW NW section 15-25-14w, Stafford County wildcat, is a prospective pool opener. It had 2,900 feet of oil in the hole from pay at 3,722-27 feet, and was running tubing.

Ted Kors and others No. 1 Koblitz, SE SW NW section 23-12-18w, wildcat in north central Ellis County, topped Siliceous lime at 3,675 feet, was bottomed at 3,698 feet, and oil rose 1,600 feet in the hole in 16 hours. Operators were preparing to test.

Another prospective pool opener was C. L. Price and others No. 1 Deutsch, NW NW NE section 16-16-13w, in northern Barton County. It had 2,000 feet of oil in the hole from Siliceous lime at 3,373-75 feet.

A Woodson County wildcat was showing as a pool opener, and a wildcat between the Hauschild and Saxman areas in southern Rice County was showing oil in Conglomerate.

The Kansas daily allowable production for December was placed at 163,225 bbls. of oil, a 5 per cent increase over the Bureau of Mines allocation, by the Corporation Commission. The 18,596 wells in the state have a total potential of 1,485,141 bbls. daily, an all-time high for the state, according to T. A. Morgan, director of the conservation division of the commission.

The Trapp Pool

The prolific Trapp pool of southern Russell County was extended one-fourth mile southeast at Skelly Oil Co. No. 1 John Neidens, NW SW NE section 32-15-13w, one of five completions in the area the past week. It topped Kansas City lime at 3,070 feet; Siliceous lime, the producing horizon, at 3,325 feet, and was bottomed at 3,331 feet. After acidizing with 3,000 gallons and shooting with 20 quarts, it pumped 1,498 bbls. of oil in 14 hours and made potential of 2,621 bbls.

Coralena Oil Co. No. 13 Trapp, NW NW SE section 30-15-13w, made potential of 2,808 bbls. of oil after acidizing with 2,000 gallons. Production was from Siliceous lime at 3,249-53 feet, total depth. Top of anhydrite was 790 feet; Kansas City lime, 3,005 feet. Same operator's No. 14 Trapp, SW NW SE section 20-15-13w, had Siliceous lime at 3,259-63 feet, total depth, was acidized with 2,000 gallons and made potential of 2,705 bbls. of oil.

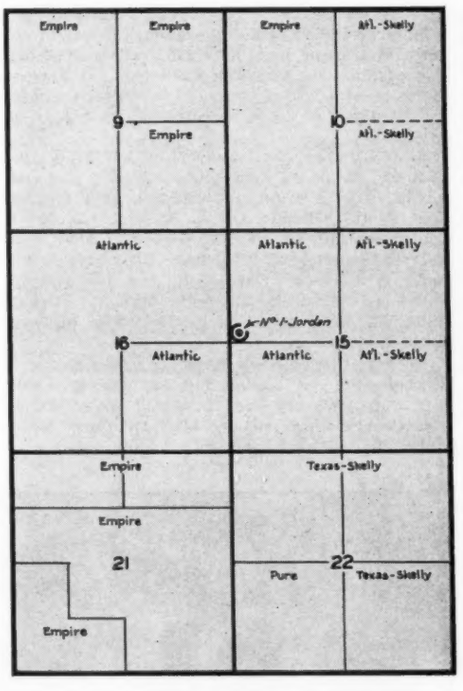
W. I. Southern, Inc., No. 8 Shaffer, SW NW NE section 31-15-13w, had Oswald lime at 3,005 feet; Siliceous lime 3,247 feet; total depth, 3,252 feet. After acidizing with 4,000 gallons, it made potential of 2,555 bbls. of oil. Same operator's No. 1 Michaelis, NE NE NW section 31-15-13w, made potential of 2,439 bbls. of oil after acidizing with 2,000 gallons. It topped Oswald lime at 3,030 feet; Siliceous lime, 3,265 feet; total depth, 3,270 feet.

The Trapp pool had a total potential of 73,291 bbls. of oil daily for 37 wells, according to December 1 report of the conservation division, Kansas Corporation Commission. This did not include the new Skelly well. Only four other fields in Kansas currently have a larger total potential than Trapp. They are the Silica, Burrton, Lorraine and Hauschild pools.

Russell County

Four producers were completed in Russell County, in addition to the new wells in the Trapp field. Central Petroleum Co. No. 2 Rusch "A," C N half SE SW section 19-12-15w, Fairport pool, made potential of 520 bbls. of oil after acidizing with 6,000 gallons and was completed at 3,083 feet, total depth. Previously, it was acidized with 2,000 gallons and made potential of 523 bbls. of oil, with 2 per cent water.

J. C. Shaffer, Inc., No. 7 Polcyn, SW SE NE section 10-14-15w, Gorham district, had Gorham sand at 3,269-71 feet, total depth, and made potential of 903 bbls. of oil. W. E. Witt No. 4 Witt, SW NE SE section 3-14-15w, topped anhydrite at 905 feet; Gorham sand, 3,293 feet, was bottomed at 3,295 feet, and made potential of 1,244 bbls. of oil. Urschel & Seeligson No. 2 Polcyn, SE SW NE section 10-14-15w, and No. 3 Polcyn, NW SW NE section 10-14-15w, were abandoned locations.



Empire Oil & Refining Co. and Atlantic Refining Co. No. 1 Jordan, wildcat in section 15-25-14w, Stafford County, was showing as a pool opener.—(Mid-Continent Map Co., Wichita)

Equity Gas Co. No. 2 Gross, SW NW NE section 31-13-12w, Bunker Hill pool, was acidized with 6,000 gallons and made potential of 670 bbls. of oil. Top of anhydrite was 775 feet; Kansas City lime, 3,003 feet; pay, 3,015-20 feet; total depth, 3,033 feet.

Comac Oil Co. No. 1 McConnell, C SW SE section 22-13-14w, topped Siliceous lime at 3,294 feet, had a slight showing of oil and water at 3,325-36 feet, and was dry and abandoned at 3,338 feet, total depth.

New work in Russell County was as follows: Empire Oil & Refining Co. and Indian Territory Illuminating Oil Co. No. 1 Atherton, C W half W half SE section 25-13-15w, location; Empire Oil & Refining Co. No. 1 Strecker, NW NW NE section 35-14-14w, moving in material; same operator's No. 12 Crawford, NW NW SW section 2-14-15w, rig; Hartman & Blair No. 7 Rouback, SE SE NW section 2-14-15w, rig; Urschel & Seeligson No. 1 Polcyn "B," NW NE SE section 10-14-15w, set 10-inch casing at 615 feet; Empire Oil & Refining Co. No. 1 Sellers, NE SW SW section 30-15-13w, building rig; W. I. Southern, Inc., No. 4 Boomhower "A," SW SW NE section 30-15-13w, rig; same operator's No. 1 Sellens Heirs "B," SE SE NW section 30-15-13w. Location.

Bridgeport Machine Co. No. 2 Mills, NW SE SE section 33-13-15w, had Gorham sand at 3,313-15 feet, total depth, and oil rose 1,500 feet in the hole in 8 hours. W. I. Southern, Inc., No. 1 Boomhower "A," SE SE NE section 30-15-13w, had Siliceous lime at 3,243-45 feet, total depth, and 2,500 feet of oil rose in the hole in 1½ hours. Same operator's No. 2 Michaelis, SE NE NW section 31-15-13w, had Kansas City lime at 2,904-09 feet, total depth, and oil rose 1,400 feet in the hole in 8 hours.

Estimated Daily Production

Estimated daily average production of Kansas for the week ending December 5, and for the preceding week, was as follows:

	Barrels	
	Dec. 5	Nov. 28
Oxford City	2,975	3,025
Burrton	13,200	13,500
Ritz-Canton	5,875	5,900
Hollow-Nikkel	3,700	3,700
Vishell	2,800	2,825
Ellsworth:		
Lorraine-South Lorraine	5,580	6,402
Other pools	1,423	1,470
Rice-Barton counties:		
Bloomer	935	2,360
Chase	8,700	9,210
Geneseo	1,170	1,370
Raymond	2,475	3,270
Silica	9,340	12,825
Keesling	1,350	2,350
Hauschild	1,850	2,735
Miscellaneous Rice	4,993	5,230
Miscellaneous Barton	2,505	2,735
Russell County:		
Fairport	3,235	1,815
Gorham-East Gorham	8,230	6,940
Russell	4,250	2,605
Sullivan	2,730	3,320
Trapp	3,110	2,820
Other pools	5,298	5,314
Sedgwick County:		
Valley Center	1,300	1,275
Greenwich	1,140	1,178
Robbins	1,135	1,200
Eastborough	715	725
Other pools	324	360
Ellis County	3,755	3,387
Kingman County	560	630
Stafford County	1,690	2,056
Greenwood County	10,000	10,150
Butler County	17,000	17,850
Other fields	26,857	24,868
Total Kansas	160,200	165,400

Rice County

Five oil wells were completed in Rice County. In the Silica district, Mid-Continent Petroleum Corp. No. 8 Risse, NE cor. section 6-20-10w, made potential of 1,845 bbls. of oil in 22 hours after acidizing with 2,000 gallons. Top of Siliceous lime was 3,290 feet; total depth, 3,305 feet. J. H. Tatlock No. 11 Bercheit, SE SW NW section 6-20-10w, topped Siliceous lime at 3,263 feet, was bottomed at 3,274 feet, acidized with 1,000 gallons and made potential of 1,510 bbls. of oil, with 4 per cent water. Same operator's No. 1 Drew, NW NW SW section 5-20-10w, made potential of 1,450

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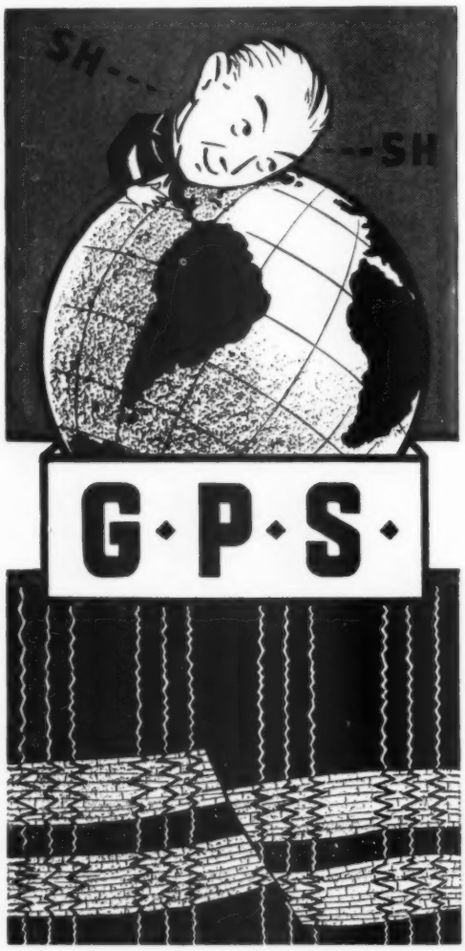

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bbls. of oil and was completed at 3,316 feet, total depth. Top of Siliceous lime was 3,302 feet.

In the Geneseo district, Continental Oil Co. and others No. 5 Lansing, NE NE SE section 25-18-8w, was completed at 3,185 feet, total depth, and made potential of 1,479 bbls. of oil after acid treatment. Top of Siliceous lime was 3,156 feet.

Shell Petroleum Corp. and others completed No. 3 Hafermann, NE NE SE section 6-19-9w, in the new Hafermann pool, at 3,238 feet, total depth. Top of Siliceous lime was 3,218 feet. It pumped 178 bbls. of oil in 6 hours. After acidizing with 2,000 gallons, it made potential of 2,189 bbls. in 23½ hours.

Gulf Oil Corp. No. 1 Morse, NW NW SE section 15-20-9w, failed to find oil production and was completed as a water disposal well at 4,103 feet, total depth. Empire Oil & Refining Co. No. 2 Coldwater "B," SE NE NW section 17-20-9w, topped Siliceous lime at 3,316 feet, had a hole full of water at 3,355 feet, total depth, and was dry and abandoned. E. J. Shaffer and others No. 5 Hauschild, NW SW NE section 15-21-7w, was an abandoned location.

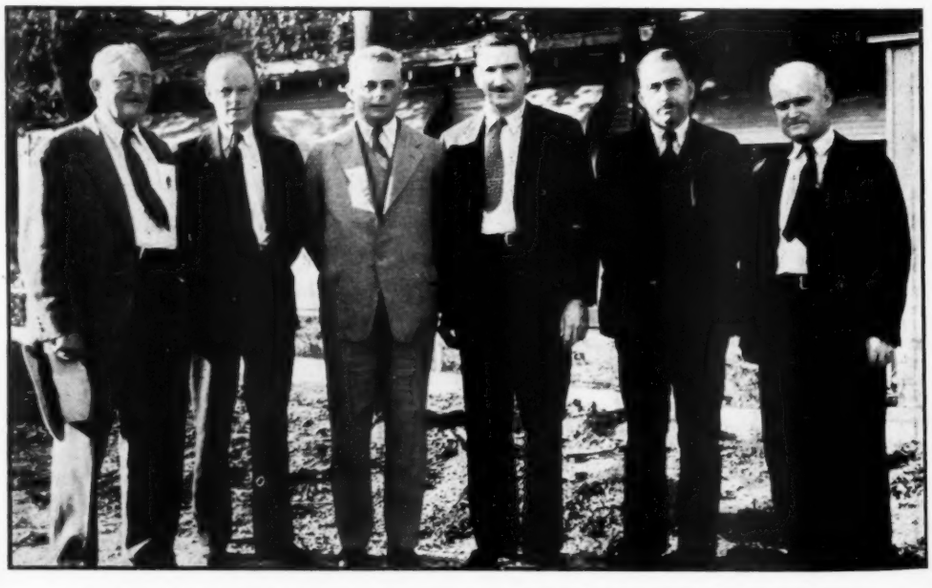
Dickey Oil Co. was building rig for No. 1 Brothers, SE cor. section 1-21-7w, wildcat northeast of the Wherry and Hauschild pools. Other Rice County work included Gulf Oil Corp. No. 4 Stoltz, Jr., NW cor. section 5-20-10w, moving in material, and Empire Oil & Refining Co. No. 2 Jones, NE NW NE section 17-20-9w, building rig.

Near Completions

Empire Oil & Refining Co. No. 1 Weiland, NW NW NE section 5-20-9w, topped Siliceous lime at 3,229 feet; total depth, 3,237 feet; oil rose 2,800 feet in the hole, and it was acidized but not tested. Gulf Oil Corp. No. 1 Schmidt, NE SE SE section 6-20-10w, was bottomed at 3,342 feet, and swabbed 30 bbls. of oil per hour for 6 hours. Stanolind Oil & Gas Co. No. 8 Specht, NE NW SE section 6-20-10w, swabbed 100 bbls. of oil an hour at total depth of 3,313 feet. J. H. Tatlock No. 14 Berscheit, SW SW NW section 6-20-10w, had 2,000 feet of oil in the hole at 3,272 feet, total depth, and same operator's No. 15 Berscheit, SW SE NW section 6-20-10w, had a hole full of oil at 3,275 feet, total depth.

In the Saxman area, Sage, Douglass & Yankey No. 1 Patton, SW cor. section 5-21-7w, discovery well, had not been officially completed, but made potential of 1,137 bbls. of oil and was producing at the restricted rate of about 200 bbls. of oil daily. It is bottomed at 3,342 feet. Douglass Oil & Gas Co. No. 1 Hughes, SE cor. section 6-21-7w, west offset to the Saxman discovery well, topped Conglomerate at 3,331½ feet, and was bottomed in top of Chat at 3,347 feet. It flowed 179 bbls. of

A veteran poses with two rising young oil officials: In the center is J. J. Hall, independent producer, and flanking him are R. M. Hall, superintendent for the Russell Oil Corp., (on his right) and B. W. Shindhelm, tool pusher for the same company. The locale is Russell County, Kansas



Empire Oil & Refining Co. group at Eldorado, Kans. Reading from left to right: A. J. Leonard, superintendent of construction; N. M. Hutchinson, production engineer; C. S. Warren, division superintendent in Kansas; George F. Berry, Jr., resident geologist; N. A. Bash, production chemist and H. J. Coostand, chief clerk

oil in 6 hours and was given potential rating of 643 bbls.

Aylward and others No. 1 M. A. Johnson, NW NW NE section 17-21-7w, wildcat west of Hauschild and southeast of Saxman, and a possible connecting link between the two pools, had a good showing of oil in Conglomerate at 3,358-60 feet, total depth, and was rigging up standard tools.

Barton County

In the Barton County sector of the Silica field, C. B. Davis completed No. 5 Steckel, SE cor. section 1-20-11w, at 3,288 feet, total depth. It made potential of 1,538 bbls. of oil. Top of Siliceous lime was 3,272 feet.

Yarnell & Carlson and others No. 3 Bloomer, SW NE NW section 36-17-11w, Bloomer pool, made potential of 1,139 bbls. of oil after acidizing with 4,000 gallons and was completed at 3,329 feet, total depth. Previously, it pumped 292 bbls. of oil in 24 hours after acidizing with 2,000 gallons. Top of anhydrite was 600 feet; Kansas City lime, 3,005 feet; Siliceous lime, 3,305 feet.

E. M. Swearer No. 1 Heinz, NW NW SW section 28-18-11w, was a cellar.

McPherson County

Empire Oil & Refining Co. No. 1 Keefer "A," SW cor. section 25-18-1w, North Canton area, McPherson County, topped Wilcox sand at 3,397 feet; had a hole full of water at 3,400-02 feet, and was dry and abandoned at 3,406 feet, total depth. Top of Chat was 2,811½ feet; Viola lime, 3,306 feet.

Hutchinson Oil Co. and others No. 7 Eaton, NW NE NE section 26-19-2w, an old well, was deepened from 3,423 feet to Siliceous lime at 3,490-3,547 feet, total depth, and recompleted as a water disposal well.

Two new operations were reported in McPherson County. Ohio Oil Co. No. 8 Decker, NE SE SE section 20-21-1w, was building rotary rig. Continental Oil Co. No. 2 Blair, NW SW SW section 21-21-1w, was drilling at 2,212 feet.

Ellis County

A. H. Gibson and others No. 4 Ruder, NE SW SE section 8-15-18w, Ruder area, Ellis County, was temporarily abandoned at 1,135 feet.

G. M. Piggott and others No. 1 Homburg, C NE section 33-11-20w, wildcat in northwestern Ellis County, topped anhydrite at 1,595 feet and was drilling at 2,933 feet. Ryan Consolidated Co. No. 2 Bemis "B," SW SW NW section 22-11-17w, was a location.

Ellsworth County

The only Ellisworth County completion was Empire Oil & Refining Co. and others No. 6 Janssen "B," SW cor. section 34-17-8w, in the Geneseo district. It was acidized with 4,000 gallons and made potential of 553 bbls. of oil. Top of Siliceous lime was 3,255 feet; total depth, 3,270 feet.

New work in Ellsworth County: Empire Oil & Refining Co. No. 1 Brown, SE SE NW section 1-17-9w, was moving in material for a wildcat north of the Lorraine field; Continental Oil Co. and Empire Oil & Refining Co. No. 7 Janssen "B," NW SE SW section 34-17-8w, was building rotary rig. Bradley & Scanlon No. 1 Neinke, NE NW NW section 13-17-9w, an old well, was deepened from 2,206 feet to 3,050 feet, but had not been completed. It had a showing of oil at 3,042-47 feet.

Reno County

The only well completed in Reno County was in the Lerado field. It was Shell Petroleum Corp. No. 2 M. Whipple, NW SW NE section 15-26-9w. It topped Chat at 3,877 feet; Viola lime, the producing formation, at 4,137 feet, and was bottomed at 4,155 feet. In 3 hours it flowed 364 bbls. of oil and 11 bbls. of water. It was acidized with 2,000 gallons, flowed 1,102 bbls. of oil and 70 bbls. of water in 6 hours, and made potential of 4,178 bbls.

Sumner County

Two good producers were completed in the Wellington pool, Sumner County. Stelbar Oil Corp. No. 9 Erker, NE NE SW section 33-31-1w, topped Chat at 3,632 feet; drilled to 3,676 feet, total depth; acidized with 3,000 gallons and flowed 1,495 bbls. of oil on potential test. Urschel & Seeligson (Transwestern) No. 4 Murphy, SW SE SE section 32-31-1w, flowed 1,087 bbls. of oil on potential test after acidizing with 1,000 gallons. It topped Chat at 3,649 feet; total depth, 3,695 feet.

W. C. McBride, Inc., and Olson Oil Co. No. 1 Kinlund, NE NW NE section 24-34-1e, wildcat, was dry and abandoned at 3,908 feet, total depth. Top of Siliceous lime was 3,894 feet.

The only new work reported in Sumner County was in the Wellington pool. Sinclair Prairie Oil Co. No. 9 Kamis, C N half S half SW section 28-31-1w, was a cellar.

Greenwood County

Ohio Oil Co. No. 1 Schwab, SE SW SE section 9-24-10, wildcat west of the Parks pool, was a location.

Two Greenwood County wildcats were reported as failures, and location for a new one was announced. Estes and others No. 1 Edgar, NW NW SE section 1-28-8, southwestern corner of the county, had Peru sand at 1,750-1,848 feet, and was dry and abandoned. Dunn & Lewis No. 2 Dawson, C NE NE section 27-26-13, was dry and abandoned at 1,200 feet, total depth.

Butler County

Pryor & Lockhart and others No. 4 Gunther, SW SW NE section 29-26-7, Young area, Butler County, had Mississippi pay at 2,750-54 feet; water intrduded at 2,820 feet, total depth, and it was plugged back to 2,753 feet to complete. After acidizing with 2,000 gallons, it made potential of 130 bbls. of oil, with 20 bbls. of water.

Ness County

Sayre Oil Co. and others No. 1 Ryersee, C NE SE section 34-18-21w, wildcat in eastern Ness County, was dry and abandoned in Siliceous lime at 4,670-96 feet, total depth. Top of Oswald lime

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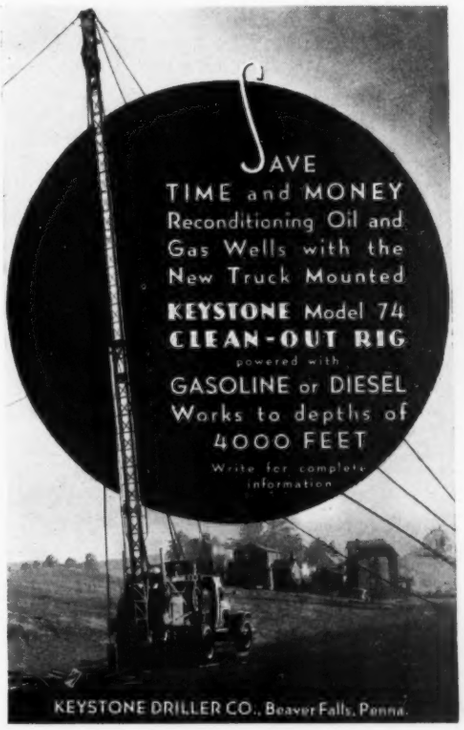


was 3,710 feet; water appeared at 4,229-30 feet: Mississippi lime was had at 4,248-4,445 feet, and top of Viola lime was 4,455 feet.

Smith County

Helmerich & Payne and others No. 1 Meyer, C NE SW section 10-5-11w, topped Siliceous lime at 4,143 feet, cores from 4,153-61 feet, total depth, had a sulfur odor, and it was dry and abandoned. This wildcat was in southeastern Smith County, less than 30 miles south of the Nebraska line.

Chautauqua County

Union Gas Co. No. 8-A Wilson, NE SW NE section 14-33-12, northeast of Sedan, in Chautauqua County, was completed at 1,819 feet, total depth, in top of Siliceous lime. It flowed 65 bbls. of oil an hour for 3 hours through tubing, and was shut in to 50 bbls. of oil a day. This is in an old gas area, but is classed as a wildcat oil discovery well.

Wilson County

Major Oil & Gas Co. No. 7 Martin, SW section 10-29-17, east of Altoona, in Wilson County, produced 200 bbls. of oil in 17 hours at 862 feet, total depth, it was reported. This is considered the best showing yet made by any of the wells drilled in the new area opened between Chanute and Altoona several months ago.

Woodson County

Elbar Corp. No. 4 Opperman, SW NE NE section 27-23-17, Woodson County, had a hole full of water at 1,704 feet and was dry and abandoned at 1,707 feet, total depth.

Nigh & Kilby No. 1 Hogueland, SW SE NE section 3-24-15, wildcat, topped Chat at 1,477 feet; Mississippi lime, 1,487 feet; had pay at 1,494-96 feet, total depth, and oil rose 1,200 feet in the hole, but it had not been tested. This wildcat is southeast of the Wiede pool.

Ross & Marshall No. 1 Bresner, SW SW SE section 6-26-15, wildcat northeast of Big Sandy pool, was moving in material. Alexander & Bell No. 2 Haas, SW SE SE section 22-23-14, was rigging up machine. Elbar Corp. No. 5 Opperman, NE NW NE NE section 27-23-14, was a location. C. A. Aikman No. 1 Massey, C S half SW SE section 35-23-14, was rigging up machine.

Coffey County

Alexander & Bell No. 1 Demler, NW NW NE section 7-23-15, had Mississippi lime at 1,572-82 feet, total depth, set 6-inch casing and was waiting on cement. It is in the Van Noy pool, Coffey County. Ward McGinnis No. 1 Mentzer, C NW SW section 32-22-15, was drilling at 450 feet. Wolf Creek Oil Co. No. 1 Vannocker, SE SW SE section 1-23-14, was rigging up machine.

Rooks County

Green Oil Co. No. 1 Baxa, SW SW NW section 12-9-17w, was a location for a new Rooks County well.

Rocky Mountain Fields

(Continued from Page 77)

Ohio Oil Co. No. 1 Northern Pacific, SE NE SW sec. 11-7s-21. Drlg. 5,701 ft.
Miracle Oil Co. No. 2 Blue Creek, CWL NE SE sec. 3-6s-23e. Drlg. 1,160 ft. in Colo. sh.; (formerly Round Butte Oil Co.)
Henderson Prod. Co. No. 1-H-11 Elk 11, SE SE NW sec. 35-9s-23e. Drlg. 700 ft.

Fallon County

Montana-Dakota Utilities No. 2 Warren No. 1 Unit 5, C SW sec. 23-8n-59e. Drlg. 5,740 ft.
Montana-Dakota Utilities No. 3 Smith No. 1 Unit 8, C SE NW sec. 8-4n-62e. Drlg. 5,424 ft.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e. S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 5-22n-17e. Drlg. 3,325 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-2e-18e. S.D. 496 ft.; C.D.
Emmons et al No. 3, SE NE NE sec. 6-21-17e. Drlg. 1,065 ft.

Glacier County

The Cut Bank field had a lively week with six completions and five new operations.

The Montana Power Gas Co. No. 1 Schutte Unit No. 1, 500 feet south of north line and 2,640 feet east of west line, section 5-34n-5w, was completed for 8,250,000 feet of gas at 2,725 feet. The Moulton sand was at 2,615-40 feet, with 500,000 feet of gas at 2,630-40 feet. The Sunburst was at 2,657-85 feet and the Cut Bank sand at 2,690-2,722 feet. Elevation 3,907 feet.

The Montana Power Gas Co. No. 3 Simero, C NE SE section 6-33n-5w, swabbed 247 bbls. the first 24 hours at a total depth of 2,810 feet. The Sunburst at 2,745-50 feet was dry, and the top of the Cut Bank was at 2,763 feet. The pay was at 2,787-2,808 feet and the top of the Ellis at 2,808 feet. Elevation, 3,730 feet.

R. C. Tarrant No. 7 Getty, SW NW SW section 2-34n-6w, had 800 feet of oil in the hole at 2,918 feet, total depth, but has not had a swabbing test. The Sunburst at 2,810-20 feet was dry. Top of the Cut Bank was at 2,855 feet and the pay at 2,877-2,916 feet.

The Texas Co. No. 6 Tribal-122, C NE SE section 6-32n-5w, swabbed 105 bbls. the first 24 hours from the pay at 2,900-12 feet. Total depth, 2,915 feet. The Sunburst at 2,820-50 feet was dry and top of the Cut Bank at 2,865 feet and top of the Ellis at 2,912 feet. Elevation, 3,677 feet.

The Texas Co. No. 7 Tribal-122, Lot 9, section 5-32n-5w, swabbed 30 bbls. the first hour at a total depth of 2,871 feet. The 7-inch was cemented at 2,826 feet.

A. E. Wilkinson No. 2 All.-127, C SE NE section 1-32n-6w, swabbed 160 bbls. the first 24 hours at 3,022 feet, total depth. The Sunburst was at 2,913-71 feet with a show of oil at 2,940 feet and 150 feet of oil at 2,965-71 feet. Top of the Cut Bank was at 2,980 feet and the pay at 3,012-20 feet. Elevation, 3,702 feet.

A. B. Cobb No. 2 All.-115, SE NE SE sec. 31-33n-5w. T.D. 2,345 ft.; drlg. up baller.
Drumheller Reservation Synd. No. 1 Tarrant, C SW SW sec. 21-23n-6w. Drlg. 1,800 ft.
Wm. Hanlon, Agt., No. 1 All.-128, C SE NE sec. 12-32n-6w. Drlg. 750 ft.
Hannah-Porter Co. No. 2 All.-130, C NE SW sec. 6-32n-5w. R.O.G. (first report).
L. V. Hole No. 2 All.-124, C SW SE sec. 1-32n-6w. Drlg. 2,070 ft.
Jack Marshall No. 2 All.-119, C Lot 3, sec. 1-32n-6w. Drlg. 2,300 ft.
Montana Power Gas Co. No. 1 Hope Unit, NW NW SE sec. 8-34n-5w. Spdg. (first report.)
Montana Power Gas Co. No. 1 Federal Land Bank, C SW SW sec. 30-34n-5w. R.O.G. (first report.)
Montana Power Gas Co. No. 1 Wallace, C NE SE sec. 5-32n-5w. Drlg. 1,790 ft.
Pardee Drlg. Co. No. 2 Morrison, CEL NE SE sec. 24-33n-6w. Drlg. 1,400 ft.
Vern Johnson No. 1 Tribal-118, C SW SW sec. 1-32n-6w. S.D. 2,900 ft. for 8¼-in.
Dan Whetstone No. 2 Tribal-117, C NE SW sec. 36-33n-6w. R.U. (first report.)
A. E. Wilkinson No. 2 All.-111, C SW SW sec. 31-33n-4w. Loc. (first report.)
A. E. Wilkinson No. 2 Tribal-126, NW NW NW sec. 7-32n-5w. T.D. 2,770 ft.; fsg.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 30-14n-15w. S.D. 1,300 ft. (cor.).

Liberty County

Western Natural Gas Co. No. 2 Wallace, NW NW SW sec. 15-37n-4e. S.D. 1,800 ft. for winter.

Musselshell County

Geo. Gregory et al No. 24-A Govt., NW SW NW sec. 25-11n-24e. Drlg. 465 ft. in Quadrant.

Park County

Ben W. Ryan et al No. 1 Burgess, SE SW SW sec. 28-2n-11e. Drlg. 548 ft.

Petroleum County

H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 610 ft.

Phillips County

R. G. Parrent No. 1 Hartman, C NW SE sec. 12-24n-25e. Drlg. 642 ft.
Montana-Dakota Utilities Co. No. 1 Bell, NW SW NW sec. 8-32n-34e. Drlg. 100 ft. (first report).
City of Malta No. 1, C SE SE SE sec. 18-30n-30e. Drlg. 50 ft. (first report).

Pondera County

Clinch Pet., Ltd., No. 1 Holan, NW SW NW sec. 12-23s-6w. T.D. 2,200 ft.; trying to land 10¾-in.
K. P. Hardee No. 1 Hughes, NW NE NW sec. 12-30n-4w. Drlg. 2,400 ft.
Kirk Oil Co. No. 1 Kellogg, SE NW NE sec. 31-28n-4w. Drlg. 1,970 ft.; 7-in. at 1,911 ft.

Sheridan County

Cheyenne O. & G. Co. No. 1 Olson, SE SE SE sec. 14-35n-53e. S.D. 2,615 ft.; 500,000 ft. of gas 1,050 ft. and 500,000 ft. at 1,305 ft.; S.O. with 12⅛-in.

Teton County

The Shell Oil Co. of California is reported to have taken options on practically all of the acreage on the Willow Creek structure west of the town of Choteau and is preparing to make a geophysical survey. The structure was drilled by the Western Petroleum Exploration Co. in 1921 and the test was abandoned in the red beds without reaching the Cut Bank sand which at that time had not been proven productive. It was originally mapped by Eugene Stebinger, of the U.S.G.S.

R. C. Tarrant No. 1 Jones, C SE NW sec. 3-26-6w. M.I.M.

Toole County

There were four completions and four new operations in the Kevin-Sunburst field.

The Big West Oil Co. offered producers from whom it is buying, effective December 1, to prorate their wells to 50 per cent during the winter months, or run 100 per cent of the oil, pay for 50 per cent, and issue receipts for 50 per cent of production stored during the winter and to be purchased next year.

Big West Oil Co. No. 4 Dahlquist, NE NE NW section 21-35n-3w, pumped 20 bbls. per day initial at 1,822 feet after plugging back from 1,865 feet, shooting and reacidizing.

Dr. B. A. S. Aronow No. 5 Government, SE NW NW section 21-35n-3w, made 8 bbls. per day in the Ellis-Madison at 1,823-37 feet and 750,000 feet of gas in the Sunburst at 1,530-40 feet, before acidizing.

Agen & Krause Co. No. 1 Krause, SE SE SE sec. 9-35n-3w. Loc.
Agen & Goeddertz No. 4 State, NE NE SE sec. 16-35n-3w. R.U. (first report.)
Big West Oil Co. No. 5 Dahlquist, NW SW NE sec. 21-35n-3w. Loc. (first report.)
Bryant Bros. No. 1 Lashbaugh, NW SE NW sec. 34-35n-2w. Drlg. 850 ft.
A. E. Crumley No. 11 Shaw, SE NW NE sec. 35-36n-2w. T.D. 1,587 ft.; shot Sunburst at 1,569-85 ft.; C.O.; 1,000 ft. of oil.
W. M. Fulton No. 1 Thompson, NW SW NE sec. 28-35n-3w. Drlg. 650 ft.
Ohio Oil Co. No. 4 Berg, C SW SW sec. 31-33n-1w. Loc. (first report.)
Wm. S. McKnight No. 1 Gunderson, SW SE NW sec. 9-35n-2w. Drlg. 190 ft. (first report.)
Shaver Oil Co. No. 1 Schaffer, SW SE NE sec. 11-34n-2w. Drlg. 900 ft.
Welch Bros. No. 2 Larum, SW SW NW sec. 25-35n-3w. S.D. 1,658 (cor.) ft.

NEBRASKA

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-32n-50w. Rng. 19¾-in. to 1,740 ft.

Redwillow County

C. W. Kelly et al No. 1 Bower, SE NW SE sec. 2-2n-29w. S.D. 1,450 ft.

Sioux County

J. M. Huber Corp. and United Producers, Inc., et al No. 1 Morgan, C SW SW SW sec. 39-95n-56w. Drlg. 2,410 ft.

Franklin County

Wm. Steinlee No. 1, SE NE SE sec. 25-1n-15w. Drlg. 385 ft. in chalk.

Lincoln County

Smith & Wright No. 1 Hansen, sec. 24-15n-30w. Completed W.W.

UTAH

Daggett County

Mountain Fuel Supply Co. is moving in for another well on the Clay Basin structure in its No. 1 Lauzur, a mile southeast of its No. 2 Murphy, completed in 1935 for 32,000,000 feet of gas, and a mile and a half southest of its No. 1 State recently completed for 8,500,000 feet.

Mountain Fuel Supply Co. No. 1 Lauzur, CNL NW NW sec. 27-3n-24e. M.I.M. (first report.)

Emery County

California Co. No. 1 Newton Palm-Unit 1, C SW SW section 22-23s-11e, San Rafael Swell, was completed as a water well at 2,285 feet, and location has been made for No. 1-A Palm. A pumping test showed the water well to have an ample supply for drilling purposes.

California Co.-Continental Oil Co. No. 1-A Palm, C NW NW sec. 27-23s-11e. Loc. (first report.)

Grand County

Columbia Crude Corp. No. 1 Rath, NW SW SW sec. 12-35s-20e. Drlg. 1,756 ft.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. Drlg. 5,710 ft.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-3e. T.D. 4,900 ft.; fsg. bit.

Summit County

Longwell Pet. Co. No. 1, SE SW SE sec. 35-3n-5e; dry, 1,920 ft.

West Texas Fields

(Continued from Page 72)

G. P. Stewart C, 950 feet, dry; Well No. 1 G. P. Stewart D, 891 feet, dry. Sams & Meyer No. 4 I. E. Self, 698-708 feet, 3 bbls. Solo Oil Co. No. 6 Deitrich, 1,094-1,112 feet, 25 bbls. White & Duncan No. 2 Prideaux, 719-31 feet, 90 bbls.

Wichita County

E. G. Boardman No. 1 J. L. Jackson, 718 feet, dry. L. T. Burns No. 1 K. T. Goetze, 778-96 feet, 10 bbls. Coleman & Coppock No. 6 G. R. Hoge, 787-805 feet, 12 bbls. Dinsmore & Stipe No. 1 G. W. Lewis, 1,001 feet, dry. King Oil Co. No. 9 Waggoner J, 1,450-63 feet, 45 bbls. Tom B. Medders No. 3 J. L. Jackson, 710 feet, dry. Pace Floyd No. 11 Allen, 900 feet, dry. L. Webb No. 1 A. J. Schulz, 2,032 feet, dry.

Michigan Field Report

UNUSUALLY ACTIVE WEEK IN COMPLETED AND NEW WORK

By
PAUL A. ELLIOTT

MUSKEGON, Mich., Dec. 7. — Twenty-six completions last week added about 2,000 bbls. of new oil initial, while treating of two previously completed wells added another 850 bbls. initial, the total of 2,840 bbls. daily topping any week's total for several months. In addition four new gassers added 78,000,000 feet of open flow capacity daily, and nine tests were dry in the Dundee. Two deepened gassers in the Austin field added 79,000,000 feet daily.

Completions were recorded in 11 widely separated counties during the past week, though all of the new producers were in proved oil or gas areas. Seven of the nine "dusters" were in wildcat areas and two in proved fields. Dry holes were completed in Clinton, Gladwin, Gratiot, Isabella, Lapeer, Midland, Montcalm, Roscommon and Saginaw counties.

Arenac County

Outstanding development of the past month was the opening of a new field in Clayton Township, Arenac County, by the McClanahan Oil Co., which only last week completed No. 1 Seignious, SE SW SE section 3-20n-4e, for a daily output of between 1,000 and 1,100 bbls. daily 51 feet in the Dundee limestone topped at 2,455 feet. First oil was encountered at 2,470 feet and the hole last week drilled to 2,506 feet before suspension of activities.

Anticipated completion of a second test in the same township, the McClanahan Oil Co. No. 1 Mee, NE SE SW section 11, was delayed when water broke in, possibly from a lower formation, after the hole had been drilled about 10 feet below the casing point at 2,458 feet. Dundee was topped at 2,463 feet and drilling had proceeded to 2,487 feet without production before the week ended.

One-third of the 21 permits for new locations issued during the past week by the oil and gas division of the state conservation department were for new tests in Clayton Township, increasing the Arenac County total of projects to 16, of which 14 are in the same township as the discovery well, recognized the most important development in Michigan to date this year.

The McClanahan-Mee test is located about three-fourths of a mile southeast of the discovery well, and operators were still hopeful of success as the week ended.

Isabella County

Disappointment greeted operators in the Mountain Oil & Gas and Dapar Oil Co. No. 1 Thompson test, SE SE NE section 17-15n-6w, Sherman Township, Isabella County, when it was dry in the Dundee at 3,702 feet. Located 3 miles north and half a mile west of the Pure Oil Co. No. 1 Embrey test, which opened another important new oil-producing area recently in central Michigan with its flow of about 900 bbls. daily, the Thompson has been plugged and abandoned. However, operators were still hopeful of developing an important new source of crude on the edge of the Broomfield Township, Isabella County, gas field in Sherman Township.

Vernon Township

T. F. Caldwell, Inc., completed No. 1 Stuart Beatty, NE NE SE section 21-16n-4w, Vernon Township, Isabella County, for 400 to 500 bbls. daily in the Dundee. Two smaller wells were completed by the Nollem Oil & Gas Corp., namely, the No. 3 Slentz, SW SW SW section 23, for 100 bbls. a day with prospects of increase after acid treatment and No. 4 House, NW NW NW section 26, rated good for 50 bbls. daily.

The Hyatt-Norton No. 2 State, SW NW SW section 34-15n-3w, Denver Township, also was completed for 125 bbls. daily at a total depth of 3,620 feet. Dundee was topped at 3,554 feet.

Pure Oil Co. completed three tests in the Dundee in the Jasper Township section of the state's largest oil field. The Bond-Root No. 12, NE SE section 3-13n-2w, made 320 bbls. at 3,449 feet and the Bond-Root No. 13, same section, flowed about 300 bbls. at 3,447 feet after acid treatment. Pure No. 4-B Corning Estate, SW NW section 12, added 150 bbls.

Roosevelt Oil Co. finally completed No. 10 Campbell, NE NE NW section 17-13n-1w, Porter Township, same county, for 68 bbls. initial in the Traverse topped at 2,805 feet and drilled to 2,961 feet. Rex Oil & Gas Co. was fishing for a lost bit in the No. 2-B Howland, NE NW SW section 23, Porter, nearing Dundee completion.

E. Schelling had 2,000 feet of oil in the hole in No. 1 Scott, NW SE NW section 8-14n-2w, Greendale Township, Midland County. Dundee was topped at 3,510 feet and drilling completed at 3,555 feet. The well was to be acidized before completion.

W. Hunter Atha struck water in No. 3-A F. H. Taulker, SW SE NE section 7-14n-1w, Lee Township, same county. Dundee was first encountered at 3,528 feet and drilling completed at 3,558 feet, 1 foot below an oil show which failed to develop into commercial output at 3,557 feet.

Montcalm County

The Burnstein Oil & Gas Corp. deepened two wells in the Ferris Township section of the Crystal-Moncalm oil field adding 850 bbls. daily to its dwindling output. The No. 3 Fisher, section 36-11n-5w, was boosted from 40 to 500 bbls. daily and No. 1 Kirker, section 35, from 60 to 450 bbls. a day. Same company's No. 1 Fisher and No. 2 Keel, which have been producing for several months, were scheduled for abandonment because of water encroachment.

Turner Petroleum Corp. completed No. 3 Williams, SW NW SE section 36, Ferris Township, was dry in the Dundee at 3,197 feet after topping the limestone at 3,164 feet. It was to be plugged and abandoned.

Operators were still interested in the Daily Crude Oil Co. No. 1 Weatherby, SW SW SE section 20-12n-9w, Winfield Township, completed the week before as a new discovery making about 50 bbls. a day in the Monroe. Dundee was topped at 3,210 feet and oil found at 3,311 feet with about 250,000 feet of gas.

Gassers

Largest of four new gassers of the week was the Stewart-Atha, Inc., No. 6 Amsden, C NE SW section 31-13n-7w, Millbrook Township, Mecosta County, which gauged 37,000,000 feet open flow. It is in the Tri-Townships field. Wolverine Natural Gas Corp. No. 2 Richardson, C NW SE section 3-12n-7w, in the Belvidere Township section of Tri-Townships field, also was completed for 26,000,000 feet daily.

Two smaller gassers were completed in the New Haven Township field, Gratiot County, the Wiser Oil Co. No. 1 Reinsmith, C NW SE section 3-10n-4w, making 6,250,000 feet at 980 feet or 11 feet in the Michigan Stray sand, and Leslie T. Barber No. 1 Stoffs, C NE NE section 8, making 6,200,000 feet in the shallow pay sands.

Taggart Brothers, Inc., deepened two previously smaller Michigan Stray producers in the Austin Township, Mecosta County field, the No. 21 fee, section 4-14n-9w, increasing from 44,000,000 to 87,000,000 feet daily and the No. 3 Fish, being boosted from 14,000,000 to 50,000,000 feet by 16 feet of deepening. The two added 79,000,000 feet to the open flow available for Muskegon and Big Rapids through two pipe lines.

The Carter Oil Co. completed No. 1 S. P. McConkey, C W NE NW section 23-11n-2w, in Emerson Township, Gratiot County, as a dry hole in the Dundee at 3,620 feet. Two other Gratiot County tests, one in Newark and the other in New Haven Township, were nearing completion in the shallow gas sands.

Ogemaw County

Simmons Petroleum Corp. No. 1 Husted, SE NW SE section 24-22n-13, Ogemaw Township and county, was rated good for 200 bbls. a day after being shot and treated with acid. The well extended the field half a mile south and west. M. J. Ingold also completed No. 2 Zettle, SE SW SW section 15, same township, for 40 bbls. a day topping the Dundee at 2,704 feet and completing at 2,845 feet.

Two wells were completed in the West Branch Township area, the Morris-Barnes Oil & Gas Corp. No. 6 Golf Course test, NW SE SW section 20-22n-2e, for 150 bbls. and the Mohawk Oil Development Co., Inc., No. 1 Country Club, SE NW SW section 20, for 50 bbls. daily at 2,727 feet after topping the Dundee at 2,569 feet.

Dry Holes

Five other "dusters" in wildcat areas were added to the record last week in as many counties.

St. Louis Pipe & Supply Co. finished No. 1 Harris, NW NE SW section 14-7n-2w, Bingham Township, Clinton County, at 2,855 feet after topping the Dundee at 2,810 feet.

Muskegon Development Co. completed No. 1 Wineman, SW SW SE section 33-18n-1e, Hay Township, Gladwin County, at 3,700 feet after topping Dundee at 3,496 feet.

A test in the Oregon Township, Lapeer County, area, No. 1 Kurtz, also was completed a failure by the Co-Op and Miller Oil companies. It was plugged and abandoned at 2,408 feet. It was located in SE NE SW section 5-8n-9e.

Fletcher & Leman finished No. 1 Childers, NW NE SE section 15-24n-1w, Richfield Township, Roscommon County, as a dry hole in the Dundee.

One "duster" was completed in Saginaw County, the C. W. Teater No. 1 Kilbourne and others, NE NE NE section 35-12n-1e, Jonesfield Township.

Jaenicke Oil Co. has not yet decided to abandon No. 1 Moulton, SW NW SW section 31-12n-2e, Richland Township, Saginaw County, considering acid treatment for three showings in the Dundee at 3,205-15-24. Limestone was topped at 3,170 feet and the hole was dry at 3,205 feet where water was encountered. Two other Saginaw County tests were nearing completion.

Wolverine Natural Gas Corp. failed to hit gas production in the Berea in No. 1 Cooper, SW NW NW section 31-9n-14w, an attempted 4½-mile extension of the newly developed Ravenna gas field in Muskegon County. It will be carried to the Traverse or Dundee for oil.

Lentz & Miller bradenheaded 3,250,499 feet of Berea gas encountered at 1,151 feet in No. 1 Clink

(Continued on Page 87)

North Louisiana, Arkansas

By MITCHELL TUCKER

RODESSA OUTPOST PRODUCES FROM SEPARATE STRUCTURE

SHREVEPORT, La., Dec. 7.—Fifteen new locations, 18 completions, and an all-time peak for daily production summarizes developments in the Rodessa field last week. For the seven-day period ending December 1, Rodessa daily production averaged 83,210 bbls., an increase of 4,742 bbls. daily over previous high record. Louisiana producers accounted for 58,670 bbls. and Texas wells 24,540 bbls. daily. In spite of the continued increase in production, Louisiana wells with a daily allowable of 225 bbls. per day averaged only 179 bbls., Texas wells with the same allowable averaged 215 bbls., or an average for entire field of 188 bbls. per well per day.

Gasoline movements from the field totaled 2,300,000 gallons last week, compared with 1,778,567 gallons the previous week.

Following the public hearing held at Baton Rouge, November 27, on the Louisiana side of the field, the commissioner of conservation issued order instructing that operators at Rodessa immediately repair all wells exposed to more than one producing zone, or shut their wells down. Fifty-eight producers are affected by this order, although all wells are not exposed to the four sands. Steps are being taken to either cement off or run short strings of casing to bring these particular wells within the law. The order read in part. . . "all companies producing oil and (or) gas from more than one stratum in the presently recognized Glen Rose oil and gas producing horizon shall take immediate steps to repair or recomplete such wells in such manner that production shall be confined to only one producing formation."

Daily average production, by companies, for the weekly period ending December 1, was as follows:

Company—	No. wells	Dly. av. prod.
American Liberty Oil Co.	18	3,941
Arkansas-Louisiana Gas Co.	27	4,392
Magnolia Petroleum Co.	60	12,348
Tide Water	15	2,762
Phillips Petroleum Co.	26	5,575
Standard Oil of Louisiana	53	10,472
United Gas	148	28,643
Others	95	15,078
Total	442	83,211

Outpost Wells

The eastern outpost well, Idessa Oil Co. No. 1 D. K. Sumner, NW SW SE section 10-23-15, bottomed at 6,197 feet, swabbed dry on test and is now standing for orders.

Apparently getting its production as result of a parallel fault plane 3½ miles north of the main Rodessa fault feature, J. Edward Jones No. 1 M. Z. Sharp, SW SE section 4-23-16, was completed this week, flowing 205 bbls. in 24 hours through one-quarter and one-half inch chokes, casing pressure 650 pounds, tubing pressure 75 pounds, total depth 6,035 feet. Serving as a definite indication that this production is from a separate structure, the oil tested 43.8 gravity, has a very dark amber color as compared with the dark green oil from the main reservoir. Distillation test showed 39 per cent gasoline content, compared to 27 per cent gasoline content for Rodessa crude. Additional testing is being made at the well, and leasing is quite active in the general area surrounding this well. Standard Oil of Louisiana acquired a 32-acre lease in NE SW section 9-23-16 last week, paying $5,000 and other considerations.

Rodessa Completions

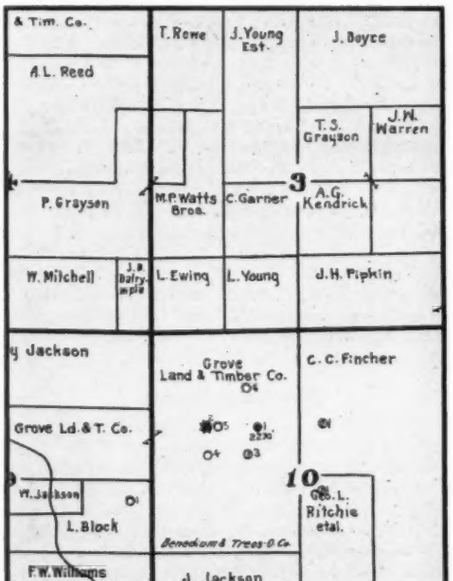
Other Rodessa completions for the week were as follows:

Lion Oil Refining Co. No. 5 Wynn, SW cor. section 9-23-15, flowed 105 bbls. per hour through one-half inch tubing choke, saturation topped 6,015 feet; total depth 6,040 feet.

Snowden and Anding No. 3 Taylor, center west half Lot 9, Block 46, Rodessa townsite, flowed 6 bbls. per hour with 8,000,000 feet gas through three-eighths inch tubing choke, casing pressure 1,500 pounds, total depth 5,952 feet.

United Gas No. 4 fee 574, NW NW SE section 16-23-16, flowed 23 bbls. per hour, three-eighths inch tubing choke, casing pressure 400 pounds, tubing pressure 450 pounds, total depth 5,993 feet.

United Gas No. 26 Rodessa Oil & Land Co., NW SW NE section 15-23-16, flowed 17 bbls. per hour, one-half inch tubing choke, tubing pressure 500 pounds, casing pressure 150 pounds, total depth 6,002 feet.



Activity in newly discovered Troy pool in section 10-14s-20w, Nevada County, Arkansas, where discovery oil well is producing about 500 bbls. daily from 2,200-foot sand, and a gas well in the 1,650-foot sand has been completed. There are three wells drilling, two rigging up, and three new locations.—(Globe Map Co., Shreveport)

United Gas No. 5 W. B. Spearman, NW SW section 15-23-16, flowed 13 bbls. per hour through 18/64-inch tubing choke, tubing pressure 310 pounds, casing pressure 800 pounds, acidized 7,000 gallons, total depth 5,985 feet.

American Liberty No. 2 J. Wiley, southeast corner J. Davenport Survey, Cass County, Texas, flowed 537 bbls. in 24 hours through one-quarter inch tubing choke, ratio 461 to 1, total depth 5,985 feet.

American Liberty No. 3 J. Wiley, J. Davenport Survey, flowed 372 bbls. per day through one-quarter inch tubing choke, ratio 472 to 1, total depth 5,986 feet.

American Liberty No. 3-A Baugus, J. H. Rives Survey, Lot 12, flowed 497 bbls. per day through one-quarter inch tubing choke, ratio 788 to 1, total depth 6,029 feet.

Magnolia Petroleum No. 4 Meda Green, J. Davenport Survey, flowed 9 bbls. per hour through three-sixteenths inch tubing choke, tubing pressure 300 pounds, saturation topped 5,993 feet, total depth 6,050 feet.

Magnolia Petroleum No. 8 Rives, northeast corner John Collom Survey, flowed 7 bbls. per hour through three-sixteenths inch tubing choke, acidized 1,000 gallons, total depth 6,007 feet.

Superior Oil No. 5-A Chew, southeast corner of Chew tract on Robert Trammel Survey, flowed 499 bbls. per day through one-quarter inch tubing choke, tubing pressure 500 pounds, casing pressure 875 feet; ratio 554 to 1, total depth 5,985 feet.

United Production Co. No. 6 J. R. Jones Unit, southeast corner Ben J. Murray Survey, flowed 43 bbls. per hour through one-half inch tubing choke, casing pressure 500 pounds, total depth 6,025 feet.

United Production Co. No. 8 J. R. Jones Unit, southeast corner Ben J. Murray Survey, flowed 37 bbls. per hour, one-half inch tubing choke, saturation 5,876 feet, total depth 6,022 feet.

United Production Co. No. 1 Rambo Unit, southeast corner M. Rambo tract, Robert Trammel Survey, flowed 536 bbls. in 24 hours, one-quarter inch tubing choke, ratio 328 to 1, total depth 6,020 feet.

United Production Co. No. 6 Rambo Unit, southeast corner of Thomas tract, flowed 32 bbls. per hour through one-half inch tubing choke, tubing pressure 275 pounds, casing pressure 100 pounds, total depth 6,010 feet.

United Production Co. No. 8 J. T. Stewart Unit, John Collom Survey, flowed 27 bbls. per hour, one-quarter inch tubing choke, tubing pressure 50 pounds, casing pressure 150 pounds, saturation 6,020 feet, total depth 6,042 feet.

United Production Co. No. 4-A J. T. Wall, Alex Archer Survey, flowed 54 bbls. per hour through three-eighths inch tubing choke, tubing pressure 650 pounds, saturation topped 6,037 feet, total depth 6,075 feet.

Estimated Daily Production

Estimated daily gross production all companies week ending December 4:

NORTH LOUISIANA

Bellevue	710
Caddo light	3,930
Caddo heavy	2,655
Converse	995
Cotton Valley heavy	270
Cotton Valley light	560
DeSoto and Red River	1,350
Elm Grove	345
Haynesville	3,145
Holly	150
Homer	2,575
Pleasant Hill	150
Rodessa	58,670
Sarepta-Carterville	445
Sligo	100
Urania	2,785
Zwolle	860
Total	79,695

SOUTH ARKANSAS

Champagnolle	2,050
El Dorado	2,090
Lisbon	280
Miller County	575
Nevada	840
Smackover light	2,115
Smackover heavy	17,600
Stephens	595
Urbana	1,575
Total	27,720

Texas side of Rodessa field—24,540 bbls. daily.

Bossier Parish

United Gas No. 1-G H. L. Skannal, NE SE NE

section 22-17-12, western flank test of Sligo gas field, topped Pettit sand at 5,152 feet and cored to total depth of 5,170 feet, indicating porous lime with stains of oil and gas. Casing is being set preparatory to testing. This well is located 1½ miles north of United's discovery well on this flank, producing from the Pettit horizon.

Caddo Parish

C. C. Crews No. 2 Pender, NW SW section 11-20-15, flowed 50 bbls. per day, total depth 2,202 feet, for completion in the Pine Island field.

Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, once highly regarded test of the Caspania area, has been plugged and abandoned at a depth of 7,377 feet after thoroughly testing the Lower Glen Rose and Travis Peak sections.

Claiborne Parish

E. T. Oakes No. 1 H. W. Patton Estate, NE cor. section 1-20-5, cored 5,359-79 feet and recovered 5 feet porous Oolitic lime and 3 feet hard lime, and an oil showing was reported. At a depth of 5,379 feet operators are preparing to run casing and test.

United Gas and others (Standard of Louisiana and Triangle Drilling Co.) No. 2 Durrett, SW cor. section 31-20-5, originally drilled to 8,616 feet as a flank test of Sugar Creek gas field, was unable to recover stuck drill pipe, so has been plugged back to 5,703 feet and completed as a 20,000,000-foot gas well, 2,200 pounds rock pressure, in the Lower Glen Rose, a former proven gas zone in this field.

United Gas and others No. 1 Taylor, section 5-19-5, Sugar Creek area, showed salt water on drill stem test after plugging back from 5,926 to 4,900 feet. Well is now standing for orders.

S. E. Langford and others No. 1 White, NE SW section 26-21-8, has been abandoned at a depth of 512 feet without carrying the hole to the original objective.

DeSoto Parish

Jal Drilling Co. No. 1 Jenkins, SE SW SE section 35-13-12, was a routine completion in the Bull Bayou field, pumping 15 bbls. daily from total depth of 2,460 feet.

R. Kamon No. 1 Roscoe, SE NW section 14-12-13, has been abandoned at 1,840 feet after testing only salt water.

R. C. Payne No. 1 Harris, section 11-13-14, has reached its original contract depth of 3,000 feet without encountering attractive showings, and well is now standing for orders.

Sabine Parish

Additional trouble was encountered at the Lower Glen Rose test at Converse last week. Cox & Whitehurst No. 1 Whitney Corp., NW NE section 8-9-13, twisted off drill stem at 4,370 feet, and well has been shut down waiting orders, total depth 5,503 feet.

A. L. Braden and others No. 1 P. Henderson, SW cor. section 29-9-13, was completed at a total depth of 1,681 feet, flowing 750 bbls. daily. Production is from the "chalk series" in the old Converse field.

Webster Parish

Seaboard Oil Corp.'s deep test northeast of Cotton Valley, No. 1 Land & Lumber Co., NW SW section 35-22-10, made drill stem test last week in the Lower Glen Rose, 5,240 to 5,311 feet, and only salt water was in evidence. Drilling is progressing below 5,500 feet.

ARKANSAS

Bradley County

Joe Modisette (farm out from Phillips Petroleum Co.) No. 1 M. Bird, N half NW NE section 28-16-12, tested only salt water in the Lower Glen Rose, topped 4,880 feet, and Upper Travis Peak, and has been abandoned at 5,195 feet. This test was prompted by structure indicated by seismograph mapping, and although the beds drilled conformed quite closely to the "picture," both saturation and effective porosity was reported to be absent.

What a good-looking lot of drillers they have in Cass County! This group was pictured on the Wall McLeod No. 1 on the Texas side of the Rodessa field. They are Harold L. Frost, driller's helper; E. J. Senne, Socony-Vacuum's chief safety director; Goldie Wilkie, chief tool pusher, Rodessa district; N. J. O'Neil, driller; S. A. Hensley, safety supervisor, Magnolia Petroleum Co., and in the back row, Millard E Little, boiler fireman; John R. Wilmoth, derrickman, and Dewey P. Hantsell, helper

Nevada County

The newly discovered Troy field has taken on considerable activity, now having one oil well completion from the 2,200-foot sand, one gas well completion from the Upper Nacatoch, three wells drilling, two rigging up, and three new locations. The asphaltic base oil being made by the discovery well is being sold to Berry Asphalt Co. of Waterloo, Ark.

Benedum & Trees No. 2 Grove, SE NW NW section 10-14-20, was completed as a gas well last week, gauging 4,900,000 feet at 330 pounds rock pressure, total depth 1,236 feet. This well was completed in the Upper Nacatoch without testing the oil bearing horizon, as gas in this area is badly needed for drilling purposes.

Benedum & Trees No. 3 Grove, SW SE NW section 10-14-20, south offset to discovery oil well, has indicated considerable oil saturation in the Nacatoch (gas horizon at No. 2) and operators are moving in pumping unit to test, while 700 feet of oil stands in the hole.

Union County

S. H. A. Oil Corp. No. 2 E. F. Gregory, SW NE SW section 10-17-14, has been completed flowing 20 bbls. per hour by heads, from the newly discovered sand in the Rainbow field, total depth 3,438 feet. This well formerly produced from the Taylor sand at about 3,390 feet, and was deepened to the present level to discover the new horizon. The same company is now preparing for the deepening of their No. 1 H. D. Warren, NE SW SW section 10-17-14.

EAST TEXAS (Border Counties)

Panola County

Four wells are coring and preparing to test the Lower Glen Rose recently discovered gas-distillate zone this week, and considerable interest centers on the Panola County activity. Motex Petroleum Co. No. 1 Furrh, Alstone Survey, bottomed at 5,036 feet, reports coring 5 feet of porous and well saturated lime from 5,030 to 5,036 feet.

Lawler Petroleum Co. No. 1 Becknell, Anderson Survey, reported good porosity but no saturation after coring around 5,235 feet, although oil showings were logged at higher levels. Glassell and Glassell are coring their No. 1 Williams, Coleman Survey, below 4,950 feet, and Magnolia Petroleum is drilling below 5,860 feet in their No. 1 E. A. Hull, Applewhite Survey, without reported showings.

ALABAMA

Houston County

Rice O. & G. Co. No. 2 Oakley Estate, sec. 9-3n-29e. S.D. 4,002 ft. in Tuscaloosa formation; rigging up heavy equipment to drill ahead.

FLORIDA

Lake County

Oil Dev. Co. of Florida No. 2 Gulf Exploration Co., sec. 17-24s-25e. Drlg. 5,646 ft. in lime.

Nassau County

St. Mary's Rives Oil Corp. No. 1 Hilliard Turp. Co., sec. 19-4n-24e. Drlg. 750 ft. Ocala lime.

Hillsborough County

Southern Pet. Co. No. 2 Mizell and Williams, sec. 4-32s-21e. T.D. 965 ft.; base of Ocala lime; waiting for csg.

MISSISSIPPI

Bolivar County

White and Jones No. 1 Ballow, sec. 17-24n-7w. Coring 1,785 ft. in Wilcox.

Kemper County

R. A. Keaton et al No. 1 Buckwalter Lbr. Co., sec. 6-10n-14e. R.U.

Hinds County

State of Mississippi No. 2 fee, NW cor. sec. 25-6n-1e. Deep test for oil in Jackson gas field; contract depth 5,500 ft.; now drlg. 2,500 ft. in chalk rock; topped 2,469 ft.

Claiborne County

Claiborne O. & G. Drlg. Co. No. 1 Crawford, sec. 6-13n-4e. Drlg. 1,980 ft.

Lamar County

Sun Oil Co. No. 1 Scanlon & Semes (deep test), sec. 28-4n-15w. Cmtd. 9-in. csg. 1,623 ft.; W.O.C.S.

Snow Black Pet. Co. No. 1 Miller and Jewell, sec. 3-4n-15w. S.D. 4,062 ft. in Wilcox formation.

Perry County

Fred E. Caurson et al No. 1 Newman Lbr. Co., sec. 26-1n-9w. T.D. 3,026 ft.; D.&A.

Fred E. Caurson et al No. 2 Jefferson Lbr. Co., NE cor. sec. 2-2n-10w. New location; R.U.

Wilkinson County

T. S. Stoneman et al No. 1 L. T. Ventress, sec. 38-2n-3w. Drlg. 4,595 ft.

Michigan Fields

(Continued from Page 85)

Estate well, SE SE SW section 12-9n-15w, Sullivan Township, Muskegon County, and continued drilling to the lower oil sands.

New Locations

Lentz & Miller were moving in for a new test in the center of SW quarter section 18, Sullivan Township, on a 160-acre tract owned by Balawender-Southland-Boston and Boswell, and announced another new location, No. 1 Stuhan-Osbeck-Tykema, NW quarter section 13, Sullivan Township, also in the center of 160 acres, a pattern for Berea gas well drilling promoted in the new field by West Michigan Consumers Co., pipe line operators who virtually control a 16,000-acre block in four adjoining townships. West Michigan is interested in the section 13 test.

Seven new permits of the 21 issued last week by the state conservation department for new tests in Clayton Township, Arenac County, are: McClanahan Oil Co. No. 2 Buffalo Land Co., NW NE NW section 10-20n-4e; No. 3 Buffalo Land Co., SE NE NW, same section; Fortney Oil Co. No. 1 Reeder, NE NE SE section 16; Turner Petroleum Corp. No. 1 Thompson, NW NE SE section 4; Gordon Oil Co. No. 1 Crandall, NE NE SE, and same company's No. 1 Mutch, NW SE NW section 11, and the Gulf Refining Co. No. 1 Kaiander, NE SE NW section 10.

Five other wildcat locations were placed under permit as follows: Prima Oil Co. No. 1 Fitzgerald, NE NE NE section 10-8n-4w, Lebanon Township, Clinton County; McClanahan Oil Co. No. 1 Every Estate, SW NW NW section 10-17n-1e, Billings Township, Gladwin County; C. W. Teater No. 1 Inda, SE SE SW section 32-18n-13e, Dwight Township, Huron County; Rex Oil Gas Co. No. 1 Meekoff, NE NE SE section 30-21n-6w, Clam Union Township, Missaukee County, and Goll, Graves & Mechling No. 1 Mossner, SW SW NW section 10-11n-6e, Frankenmuth Township, Saginaw County.

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Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Dec. 7.—The failure of the Ohio Fuel Gas Co. test on the Ben Cartheroal farm, in section 22, Clay Township, Tuscarawas County, Ohio, was regarded with disappointment by operators, in the Central Ohio field. This test was drilled to 5,289 feet, into the top Medina Red sand, which proved to be dry. Although this well was drilled primarily for gas, operators, in this sector, were greatly interested in the possibilities of this formation being a prolific oil-bearing sand. As was previously reported, this well made a small show of oil and gas in the Berea sand but two Clinton formations proved to be dry and the test is being plugged and will be abandoned.

In section 3, Sandy Township, same county, East Ohio Gas Co. has staked a new location on the J. W. Lebold farm and in section 21, Clay Township, George Jewell No. 1 Frank Kinsey drilled in the top Lime at 3,561 feet and is drilling to the Oriskany sand.

In Lorain County, Lot 55, Grafton Township, Ohio Fuel Gas Co. No. 1 A. J. Schaefer was completed below the Newburg sand at 2,300-29 feet as a commercial gas well. The same operators have staked two new locations in this county; one on the A. E. Alexander farm in Lot 75, Eaton Township, and the other on the Nettie Ohmes farm in Lot 81, Columbia Township. In Avon Township, section 14, William Dempsey No. 1 Emma Baldauf was also completed in the Newburg sand at 2,100-35 feet, and gauged 550,000 feet of gas naturally.

East Ohio Gas Co. No. 1 C. E. Rudy, in section 9, Jackson Township, Stark County, was completed in the Clinton sand at 4,224-55 feet and gauged 885,000 feet of gas after a shot. In section 5, same township, East Ohio Gas Co. is building a rig for No. 1 on the K. W. Bender farm and has staked a location for No. 2, on this same farm.

In Holmes County, section 6, Mechanic Township, Bell Brothers No. 1 Roy E. Conrad was drilled through the Berea sand at 775-805 feet without a show of oil or gas and has been abandoned. In section 33, Paint Township, Ohio Fuel Gas Co. completed a large commercial gas well on the Steve Miller property. This well was completed in the Clinton sand at 4,075-4,120 feet.

Ohio Fuel Gas Co. also completed a commercial gas well on the L. R. Tresman property, on Lot 54, Medina Township, Medina County. Pay was struck in the second Clinton sand at 3,405-30 feet.

In Licking County, section 18, Hopewell Township, Hazlett & Co. No. 2 J. D. Morehead was drilled to a total depth of 3,098 feet and made 93 bbls. the first 24 hours after a shot. In section 14, Perry Township, Rutlege & Mosholder completed Nos. 4 and 5 on the William Teagarden property. No. 4 made 7 bbls. the first 24 hours after a shot and No. 5 made 6 bbls. after a shot. In the same section, Stricker & Co. are rigged up for No. 5 on the Sarah Patten property.

Upham Gas Co. No. 1 Howard Sherer, in section 8, Howard Township, Knox County, was drilled through the second Clinton sand at 2,663-75 feet without a show of oil or gas and has been abandoned. In section 14, Butler Township, Ohio Fuel Gas Co. No. 1 H. C. Zwilling was drilled into the second Clinton sand at 2,994-3,002 feet, where it made 9,000 feet of gas, but was abandoned when the volume blew down to 4,000 feet.

In Coshocton County, section 3, Franklin Township, Ohio Fuel Gas Co. No. 3, on its own property, was completed as a large gas well in the Oriskany sand at 2,817-23 feet.

Wehrle Brothers No. 3 George Shrider, in section 31, Hopewell Township, Perry County, made 1,500,000 feet of gas naturally in the Clinton sand at 2,864-84 feet, and in section 5, Reading Township, Planet Oil Co. No. 3 O. T. Vansickle made 520,000 feet of gas naturally in the Clinton sand. In the same township, section 7, Ohio Fuel Gas Co. No. 1 J. W. Lehman was completed in the Clinton sand and is a commercial gas well.

In Meigs County, section 17, Lebanon Township, Ohio Fuel Gas Co. completed a small commercial gas well on the Lucy Rouch farm in the Berea sand at 2,024-28 feet. In section 34 the same company's No. 1 J. A. Bradford was drilled through the first Berea sand at 1,976-79 feet without a show of oil or gas and was abandoned. In section 22, Bedford Township, Clyde A. Cody No. 2 Ella Douglas, which had casing trouble and had a showing of gas drowned out in the first Berea sand, has been drilled into the second Berea sand, which is dry, and will be abandoned. In Rutland Township, section 24, McTaggaret & Co. No. 4 Harry Plummer was drilled into the Injun sand at 880-91 feet and was abandoned when the hole filled with water. In section 14, same township, F. L. McKnight No. 1 Leva Braley was completed in the second Cow Run sand at 405-17 feet and made 185,000 feet of gas. Marshall & Reed are rigging up on the Russel Cook Estate in section 1.

The Ohio Fuel Gas Co. has staked a new location on the Black Diamond Coal Co. in Fraction 7, Bern Town-

(Continued on Page 99)

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Dec. 5.—The proven field in Turner Valley, Alberta, was extended a long way to the south and west when Foundation Royalties No. 1, LSD 5, section 21-18-2w5, blew into big production while bailing to a total depth of 6,456 feet. The flow of 45 gravity crude was variously estimated from 500 to 2,000 bbls., but will probably exceed 1,000 bbls. a day, making the Foundation well the largest producer yet drilled in the Turner Valley field. Madison lime was topped at 6,018 feet. It was the farthest southwest of the active drilling tests, being approximately a mile west and slightly north of Highwood-Sarcee No. 1 naphtha producer, and 1⅝ miles almost due south of Turner Valley Royalties No. 1.

It is apparently a larger producer than Turner Valley Royalties No. 1, finished last June in the Madison lime at 6,824 feet with an initial production of 850 bbls. of 46.6 Baume crude accompanied by about 2,000,000 feet of gas. Choked back to secure the most economical gas-oil ratio, the Turner Valley well is now making around 730 bbls. a day.

Completion of the Foundation well as a large crude producer confirms the theory that the naphtha and wet gas production encountered in the earlier Turner Valley wells near the top of the structure is derived from an extensive reservoir of crude farther down the west flank. The first discovery of this nature was made 10 years ago when Model Oils No. 1 in LSD 8, section 22-20-3w5, in North Turner Valley, encountered light crude with a comparatively small wet gas flow in the Madison lime. The Model well has maintained a steady production around 140 bbls. a day since it was brought in. The theory of a crude reservoir west of the naphtha area was strengthened when, last June, Turner Valley Royalties No. 1 was brought in. At the present time west flank drilling to further test this theory extends from Dalhousie Oil Co. No. 8, LSD 6, section 30-19-2w5, to the Foundation producer, with eight wells in the potential crude zone in various stages of drilling and approximately a dozen others spotted, some of them considerably farther down the structure and several south of the Foundation producer. The test nearest completion in the crude zone is Sterling Pacific No. 3, a mile north of the Turner Valley Royalties well, which is drilling several hundred feet in the lime and should get production this month. The active drilling in the potential crude area extends over a distance north and south of approximately 7 miles.

Hon. C. C. Ross, minister of lands and mines for Alberta, has announced that between $2,000,000 and $3,000,000 will be spent on drilling programs now definitely planned for the Alberta fields. The programs contemplate 20 new tests definitely decided while at least 20 more are in prospect. Mr. Ross states that this development is partly due to the recent changes in the prospecting regulations which have granted larger areas with reduced prospecting fees as an encouragement to more intensive geological work. It is also due to the belief, confirmed by the bringing in of the Turner Valley Royalties producer, that there is on the west side of Turner Valley a potential production of high-grade crude in large volume.

Prospecting permits have been issued this season by the lands and mines department covering areas in the foothills all the way from the international boundary to Township 81, as well as other parts of the province. Three geophysical parties were active all summer, and a considerable amount of geological work has been carried out and is still in progress

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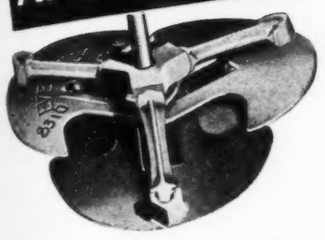

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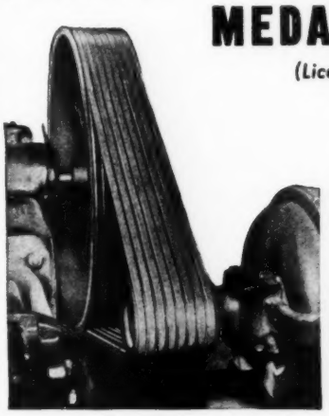

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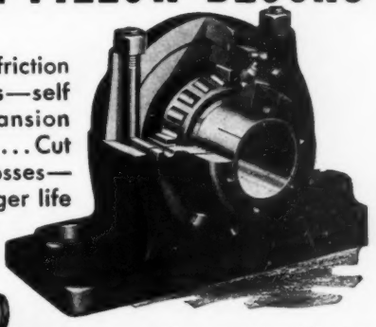

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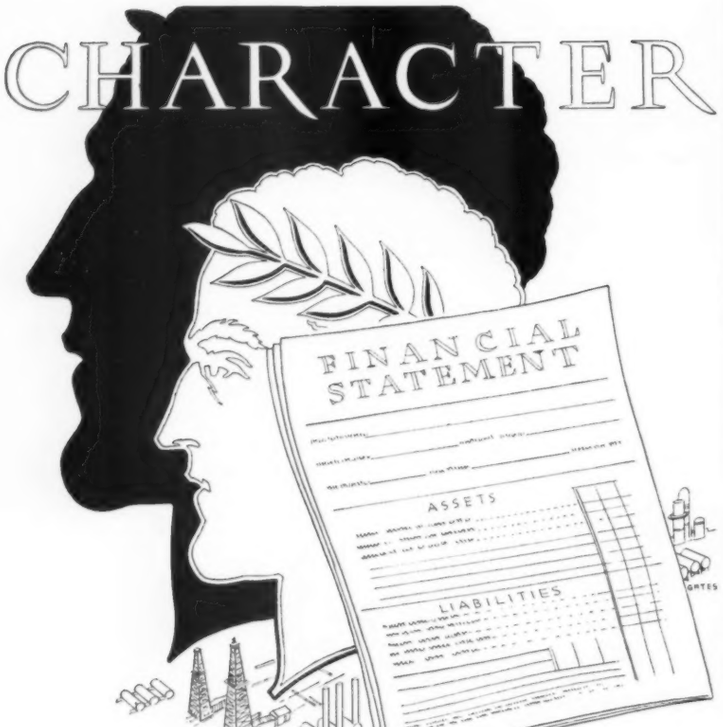

BACK of the financial statement

Lending money on the tangibles represented by the financial statement—production, receivables, inventory—is an axiom in oil financing. But the character of the men who need the money is the determining factor. Oil men of the Mid-Continent area needing temporary funds or longer time credits, are invited to submit their credit requirements at any time.

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which will furnish data for the location of further drilling tests.

On the New Valley structure northeast of Turner Valley, Alberta, McLeod Oil Co. No. 1, LSD 4, section 6-21-2w5, is deepening with cable tools from 6,880 feet after testing a substantial showing of 38-gravity crude, chiefly in the cardium sandstone around 6,657 feet. The oil is standing about 600 feet in the hole. Potential production in the cardium is estimated between 25 and 30 bbls. a day, and deepening is expected to develop gas to flow the oil. The New Valley well has been logging closely with Area Development Corp. No. 1 in the High River area, farther south, and is expected to get the Blairmore formation around 7,500 feet and to finish in the Madison lime between 8,500 and 8,600 feet. Both are potential producing horizons.

South Turner Valley

In South Turner Valley, Highwood-Sarcee Oils No. 2, LSD 1, section 21-18-2w5, which had a naphtha recovery from 22 to 25 bbls. a day from the lime at 6,560 feet, was treated with 10,000 bbls. of acid, loaded with 250 bbls. of oil. It is now bailing and testing production.

On the west side, Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, section 28-18-2w5, is deepening more than 510 feet in the lime below 6,520 feet, running one tour and taking some production. There is considerable wet gas and the recovery is a naphtha grading close to light crude.

In section 21-18-2w5, Sovereign Royalties No. 1 Myers & Wright, LSD 14, is testing naphtha recovery under various pressure conditions. Drilling fluid is still coming from the porous formation, and naphtha recovery has increased from 52 to around 70 bbls. a day. The wet gas flow was reported at 13,000,000 feet a day.

Ontario

In the Brownsville field, Oxford County, Ontario, Aloka Oil & Gas Co. No. 7, Lot 22, Concession 12, Dereham Township, has finished at 920 feet with a flow of 1,900,000 feet a day. Location is south and east of the earlier Aloka producers. Farther south and east, Armand Smith No. 3, Lot 5, Concession 10, Bayham Township, Elgin County, finished at 970 feet with 2,400,000 feet a day. These completions extend the proven field about a half mile to the southeast and from Oxford County across the line into Elgin.

North of the Treleaven producers, Adams & McNevin No. 1 Sprague, NE quarter Lot 23, Concession 11, Dereham Township, finished at 965 feet with only a small show and is being abandoned.

Ontario Drilling

In the Dawn field, Lambton County, Ontario, Union Gas Co. No. 86, SE quarter Lot 30, Concession 5, Sombra Township, west of the proven field, which finished a dry hole at 2,042 feet, has been pulled and plugged. Union No. 87, NW cor. E half Lot 23, Concession 1, Dawn Township, is down 1,810 feet without a show, and looks like a dry hole. Union No. 88, NE quarter Lot 25, Concession 2, is below 1,440 feet.

In Raleigh Township, Kent County, Burchell Syndicate No. 2, SE quarter Lot 12, Concession 14, finished at

(Continued on Page 99)

California Fields

(Continued from Page 64)

3,730 feet. These two new wells are located in the older section of the Montebello field and are located well out on the west flank in contrast with deep drilling in the extreme eastern end of the structure.

Wilmington

General Petroleum has given up all hope of developing deep light gravity oil in No. 1 Terminal in the Wilmington area and has plugged back the hole to 4,783 feet preparatory to perforating the casing above this point. No. 1 Terminal was carried down to 6,814 feet where some evidence of high gravity oil was found but the accumulation was not large enough to result in commercial production. General Petroleum Corp. is cleaning out No. 1 Patton in this area and will make a production test of the upper zone from approximately 2,674 feet. Failure of General Petroleum to develop a production of refinable crude oil has taken some of the edge off of the enthusiasm that some operators held for the Wilmington district. Richfield Oil Co. is making preparations to complete its No. 1 El Segundo in the El Segundo field of Los Angeles Basin and this new well should be tanking oil before the ink is dry on this report. The mining bureau approved the water shutoff late this week and the flow connection and other preliminary preparations are being completed. This well if the amount of productive formation opened up is any criterion should be good for about 400 bbls. per day although the company may find it necessary to put the well on the pump. In the Long Beach field Davis Investment Co. recompleted No. 1 M. & M. after deepening the hole from 3,020 feet to 4,270 feet and returned it to production pumping 25 bbls. of 21.8 gravity oil per day.

Huntington Beach

In the Huntington Beach field Termo Oil Co. has recompleted No. 4 fee after deepening the hole from 4,719 feet to 4,814 feet and the well was returned to production pumping 435 bbls. of relatively clean 25.2 gravity oil per day. Associated Oil Co. No. 4 Fowler, another deepening job, was returned to production pumping 112 bbls. of 25.4 gravity oil daily. In the Fruitvale field of Kern County Miami Oil Co. has completed its well No. 1 in section 21-29-27, pumping 152 bbls. of 21.8 gravity oil daily from 4,070 feet. In the Mountain View field Allied Petroleum Co.'s No. 2 failed to show commercial production of oil as there has been no apparent change in the large volume of natural gas that was found on the preliminary test made a few weeks ago. Two small wells were completed in the Mount Poso field of Kern County this week. In the McVan section of the field California Western Oil Co. finished its well No. 2 pumping 28 bbls. of 15.1 gravity oil per day from 1,178 feet and the A. E. Bell Corp. completed No. 3 Fitzhugh pumping 61 bbls. of 15 gravity oil daily from 1,360 feet after completing the hole with an 8¾-inch liner carrying 74 feet of perforated. Seaboard Oil Co. has given up its attempt to discover a new commercial gas field south of the Tracy gas field and is accordingly abandoning No. 1 Johnson in Alameda County as a duster at 5,925 feet.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Shell Oil Co., No. 16 Capitan, Santa Barbara Co.	32- 5-30	1,314	flow. 1,050 b.d.
General Pet. Corp., No. 21 Capitan, Santa Barbara Co.	32- 5-30	1,740	pump. 230 b.d.
Associated Oil Co., No. 1 Capitan, Santa Barbara Co.	2- 4-30	2,130	gr. sd. drlg.
Barnsdall-Rio Grande, No. 2 Elwood, Santa Barbara.	15- 4-29	6,492	P.B. 2,711
Bush Oil Co., No. 3 Santa Maria, Santa Barbara Co...	30-10-33	4,900	br. sh. drlg.
Field Gasoline Corp., No. 1 Santa Maria, S. Barbara.	21- 9-33	5,121	gr. sd. drlg.
Apache Oil Co., No. 1 Santa Maria, Santa Barbara Co.	31- 9-33	4,996	P.B. 4,350
Echo Oil Co., No. 1 Santa Maria, Santa Barbara Co..	23-10-34	2,153	sd. sh. drlg.
Union Oil Co., No. 11 Santa Maria, Santa Barbara Co.	25-10-34	3,941	sd. sh. drlg.
Union Oil Co., No. 16 Orcutt, Santa Barbara Co.	26- 9-34	3,395	br. sh. drlg.
Todos Santos Oil Co., No. 1 Casmalia, Santa Barbara.	29- 9-34	2,364	bailing
Barnsdall Oil Co., No. 2 Los Alamos, Santa Barbara.	9- 8-32	1,868	cleaning out
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co....	25-10-35	8,021	reaming
Rio Grande Oil Co., No. 6 Mesa, Santa Barbara Co...	28- 4-27	2,094	idle
Dietzman, J., No. 1 Carpenteria, Santa Barbara Co....	8- 4-25	1,026	rigged up
Union Oil Co., No. 10 Bardsdale, Ventura Co.	12- 3-20	6,561	cmtd. 6,501
Merchants Pet. Co., No. 7 Sespe, Ventura Co.	1- 4-20	280	hd. sd. drlg.
Petroleum Securities, No. 4 Shiells, Ventura Co.	3- 3-19	3,231	hd. sh. drlg.
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,380	cleaning out
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	3,194	sd. sh. drlg.
Speik Oil Co., No. 2 Sespe, Ventura Co.	33- 5-19	1,242	hd. sh. drlg.
Oil Ridge Oil Co., No. 1 Hopper Canyon, Ventura Co....	6- 4-18	2,772	pump. water
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	4,100	sd. sh. drlg.
Pacific Western Oil Co., No. 7 Temescal, Ventura Co..	4- 4-18	1,600	sd. sh. drlg.
Associated Oil Co., No. 1 Wiley Canyon, Ventura Co..	6- 3-18	2,176	hd. sd. drlg.
Munding, J., No. 1 Ojai, Ventura Co.	22- 4-22	1,041	br. sh. drlg.
Vaca Oil Co., No. 1 Oxnard, Ventura Co.	6- 1-21	2,822	cleaning out
Continental Oil Co., No. 1 Red Mountain, Ventura Co.	7- 3-23	2,651	hd. sd. drlg.
General Pet. Corp., No. 1 Padre Canyon, Ventura Co..	15- 3-24	4,917	completing
Continental Oil Co., No. 2 Padre Canyon, Ventura Co..	15- 3-24	5,759	flow. 311 b.d.
C. C. M. Oil Co., No. 2 Padre Canyon, Ventura Co....	23- 3-24	4,631	sd. sh. drlg.
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	5,076	gr. sd. drlg.
Calco Pet. Corp., No. 4 South Mountain, Ventura Co...	17- 3-20	2,189	reaming
Associated Oil Co., No. 27 Hartman, Ventura Co.	22- 3-23	3,683	hd. sd. drlg.
Associated Oil Co., No. 12 McGonigle, Ventura Co. ...	23- 3-23	9,870	hd. sd. drlg.
Associated Oil Co., No. 25 V.L.W. Ventura, Ventura Co.	23- 3-23	7,055	pump. 50 b.d.
Associated Oil Co., No. 28 Lloyd Ventura, Ventura Co.	27- 3-23	5,761	idle
Associated Oil Co., No. 78 Lloyd Ventura, Ventura Co.	27- 3-23	3,390	sd. sh. drlg.
Shell Oil Co., No. 88 Taylor Ventura, Ventura Co.	30- 3-23	7,600	flow. 1,140 b.d.
Shell Oil Co., No. 89 Taylor Ventura, Ventura Co. ...	30- 3-23	760	sd. sh. drlg.
General Pet. Corp., No. 17 Barnard Ventura, Ventura.	23- 3-23	4,984	hd. sd. drlg.
General Pet. Corp., No. 13 Notten Ventura, Ventura..	23- 3-23	9,480	flow. 1,240 b.d.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	1,360	sd. sh. drlg.
Long, H. C., No. 1 Devils Den, Kern Co.	20-25-19	921	sd. sh. drlg.
Lube Oil Co., No. 1 Devils Den, Kern Co.	2-25-18	316	sd. sh. drlg.
Associated Oil Co., No. 6-L-3 Lost Hills, Kern Co.....	2-26-20	1,900	pump. 130 b.d.
Standard Oil Co., No. 2 Lost Hills, Kern Co.	2-26-20	170	sd. sh. drlg.
The Texas Co., No. 1 Lost Hills, Kern Co.	11-26-20	1,958	pump. water
Welport Oil Co., No. 16 McKittrick, Kern Co.	26-29-21	974	sd. sh. drlg.
Woodward, Hoke, No. 6 McKittrick, Kern Co.	11-30-21	1,317	P.B. 1,167
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	2,013	P.B. 1,690
Continental Oil Co., No. 1 Wasco, Kern Co.	8-27-24	6,503	sd. sh. drlg.
Associated Oil Co., No. 5 North Belridge, Kern Co. ..	34-27-20	8,870	hd. sd. drlg.
Belridge Oil Co., No. 12-1 North Belridge, Kern Co. ..	1-28-20	7,270	br. sh. drlg.
Belridge Oil Co., No. 14-35 North Belridge, Kern Co..	35-27-20	2,530	sd. sh. drlg.
Belridge Oil Co., No. 15-35 North Belridge, Kern Co..	35-27-20	6,881	hd. sd. drlg.
Belridge Oil Co., No. 5-1 North Belridge, Kern Co. ..	1-28-20	8,486	flow. 2,928 b.d.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	8,500	sd. sh. drlg.
National Oil Co., No. 5 Grau Kern Front, Kern Co. ...	11-28-27	1,838	P.B. 1,715
National Oil Co., No. 4 Provident Kern Front, Kern Co.	11-28-27	1,848	rig. to pump
Honolulu Oil Corp., No. 69 Kern Front, Kern Co.	8-28-27	2,870	pump. 248 b.d.
Honolulu Oil Corp., No. 79 Kern Front, Kern Co.	8-28-27	2,541	sd. sh. drlg.
American Expl. Co., No. 2 Kern Front, Kern Co.	16-28-27	2,868	cmtd. 2,825
Bishop Oil Co., No. 10 Kern Front, Kern Co.	23-28-27	1,891	sd. sh. drlg.
Seskayden Oil Co., No. 2 Kern Front, Kern Co.	17-28-27	2,560	sd. sh. drlg.
Italo Pet. Corp., No. 35 Kern Front, Kern Co.	16-28-27	2,848	redrlg. 2,005
General Pet. Corp., No. 15 Kern Front, Kern Co.	14-28-27	2,017	O.S. drlg.
Hope Oil Co., No. 1 Kern River, Kern Co.	8-29-28	1,540	sd. sh. drlg.
Associated Oil Co., No. 11 Kern River, Kern Co.	34-28-28	674	sd. sh. drlg.
Bell Corp., No. 3 McVan, Kern Co.	14-27-27	1,360	bailing
Cal. Western Oil Co., No. 2 McVan, Kern Co.	23-27-27	1,178	pump. 26 b.d.
Ring Oil Co., No. 1 Dominion, Kern Co.	28-26-28	1,522	rig. to pump
The Texas Co., No. 11 Vedder Mount Poso, Kern Co. .	4-27-28	1,265	sd. sh. drlg.
Petroleum Securities, No. 2 Mount Poso, Kern Co. ...	34-27-28	1,670	sd. sh. drlg.
C. C. M. Oil Co., No. 3 Dorsey Mount Poso, Kern Co...	26-27-28	1,520	rig. to pump
Cal-Coast-Apex Oil Co., No. 1 Mount Poso, Kern Co...	36-26-27	2,560	br. sh. drlg.
Doyle Pet. Co., No. 1 Jasmine, Kern Co.	15-25-27	2,882	pumped dry
Western Gulf Oil Co., No. 34 Fruitvale, Kern Co.	22-29-27	3,950	sd. sh. drlg.
Western Gulf Oil Co., No. 35 Fruitvale, Kern Co.	21-29-27	4,300	sd. sh. drlg.
Miami Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,070	pump. 180 b.d.
Bilgrad Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,121	cleaning out
Omar Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,164	cleaning out
Linderman Oil Corp., No. 1 Fruitvale, Kern Co.	28-29-27	4,333	P.B. 4,248
Tarr & McComb, No. 4 Fruitvale, Kern Co.	23-29-27	3,197	sd. sh. drlg.
Stanford Oil Co., No. 1 Fruitvale, Kern Co.	28-29-27	510	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Mountain View, Kern Co...	13-30-28	3,470	sd. sh. drlg.
Hogan Pet. Co., No. 19 Mountain View, Kern Co.	5-31-29	6,168	fish. liner.
Hogan Pet. Co., No. 20 Mountain View, Kern Co.	4-31-29	5,673	sd. sh. drlg.
Hogan Pet. Co., No. 21 Mountain View, Kern Co.	29-30-29	5,900	sd. sh. drlg.
Standard Oil Co., No. 34 Mountain View, Kern Co. ...	13-30-28	3,598	sd. sh. drlg.
Hancock Oil Co., No. 10 Mountain View, Kern Co. ...	14-30-28	4,891	sd. sh. drlg.
Mid-State Oil Co., No. 1 Mountain View, Kern Co. ...	19-30-29	4,626	cmtd. 4,625
Mohawk Pet. Co., No. 3 Mountain View, Kern Co.	30-30-29	7,487	deep test
Wood-Callahan Oil Co., No. 2 Mountain View, Kern Co.	24-30-28	4,791	sd. sh. drlg.
Berry Holding Co., No. 4 Edison, Kern Co.	10-30-29	1,495	sd. sh. drlg.
East Edison Oil Co., No. 1 Edison, Kern Co.	23-30-30	1,035	bailing
Mohawk Pet. Co., No. 2 Arvin, Kern Co.	10-31-29	6,166	tested wet
General Pet. Corp., No. 1 Arvin, Kern Co.	26-31-29	7,462	granite
Shell Oil Co., No. 1 Arvin, Kern Co.	15-31-29	6,171	cleaning out
Arkelo Oil Co., No. 1 Lerdo, Kern Co.	23-28-26	6,497	sd. sh. drlg.
Associated Oil Co., No. 1 Rio Bravo, Kern Co.	30-29-25	7,683	cleaning out
Standard Oil Co., No. 11-1 Rio Bravo, Kern Co.	19-29-26	7,842	O.S. drlg.
Shamrock Oil Co., No. 6 Round Mountain, Kern Co. ..	6-28-29	954	sd. sh. drlg.
California Western Oil Co., No. 18 Round Mt., Kern..	7-28-29	1,175	sd. sh. drlg.
Trans-Line Oil Co., No. 1 San Emidio, Kern Co.	3-10-23	951	sd. sh. drlg.
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	1,236	P.B. 900
Standard Oil Co., No. 9-1 Ten Section, Kern Co.	34-30-26	8,174	sd. sh. drlg.
Standard Oil Co., No. 10-1 Ten Section, Kern Co. ...	20-30-26	8,740	gr. sh. drlg.
Shell Oil Co., No. 34 Ten Section, Kern Co.	29-30-26	2,885	sd. sh. drlg.
Ohio Oil Co., No. 1-E Ten Section, Kern Co.	19-30-26	8,852	dry; abd.
Superior Oil Co., No. 8 Ten Section, Kern Co.	11-30-26	7,483	gr. sh. drlg.
British-American, Inc., No. 1 Ten Section, Kern Co...	21-31-27	156	cmtd. 155
C. C. M. Oil Co., No. 21-21 Midway-Sunset, Kern Co...	21-32-23	2,379	pump. 281 b.d.
C. C. M. Oil Co., No. 24-21 Midway-Sunset, Kern Co...	21-32-23	1,831	sd. sh. drlg.
C. C. M. Oil Co., No. 1-J Midway-Sunset, Kern Co. ..	21-32-23	1,541	br. sh .drlg.
Twentieth Century Oil Co., No. 1 Midway-Sunset, Kern	1-11-24	2,960	sd. sh. drlg.
Berry Oil Co., No. 23 Midway-Sunset, Kern Co.	28-12-24	1,187	br. sh. drlg.
Associated Oil Co., No. 7 Midway-Sunset, Kern Co. ..	35-31-22	1,235	pump. 57 b.d.
Gibson Oil Co., No. 6 Midway-Sunset, Kern Co.	6-11-23	2,110	sd. sh. drlg.
Shepard Oil Co., No. 1 Midway-Sunset, Kern Co.	12-11-24	3,797	idle
Standard Oil Co., No. 28-3-D Midway-Sunset, Kern Co.	3-32-24	991	sd. sh. drlg.
Standard Oil Co., No. 21-15-D Midway-Sunset, Kern Co.	15-32-24	3,610	flow. 480 b.d.
Goldman, Frank, No. 4 Midway-Sunset, Kern Co. ..	22-32-23	1,830	br. sh. drlg.
McGray, Robert, No. 1 Midway-Sunset, Kern Co.	22-32-23	1,171	sd. sh. drlg.
McGray, Robert, No. 2 Midway-Sunset, Kern Co.	22-32-23	....	rigging up
Five Points Oil Co., No. 2-2 Midway-Sunset, Kern Co..	18-11-23	1,090	pump. 20 b.d.
Dunlap, D. D., No. 1 Midway-Sunset, Kern Co.	15-32-23	2,787	sd. sh. drlg.
The Texas Co., No. 17 Midway-Sunset, Kern Co.	32-32-24	1,751	sd. sh. drlg.
Union Oil Co., No. 2 Williams Midway-Sunset, Kern.	22-32-23	2,000	pump. 490 b.d.
Union Oil Co., No. 3 Williams Midway-Sunset, Kern.	22-32-23	290	sd. sh. drlg.
Birch-Ranch Oil Co., No. 1 Midway-Sunset, Kern Co..	22-32-23	2,142	P.B. 2,094
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	17-31-23	5,000	idle
North American, No. 4 Midway-Sunset, Kern Co.	2-32-24	4,062	bailing
Honolulu Oil Corp., No. 6 Midway-Sunset, Kern Co...	14-32-24	3,570	P.B. 3,500
Honolulu Oil Corp., No. 16 Midway-Sunset, Kern Co...	14-32-24	3,430	form. test
St. Helens Pet. Co., No. 1 Midway-Sunset, Kern Co...	22-32-24	3,730	reaming
Reserve Oil & Gas Co., No. 32-1 Tejon, Kern Co.	33-11-19	6,032	P.B. 5,086
Reserve Oil & Gas Co., No. 33-2 Tejon, Kern Co.	33-11-19	4,518	redrlg. 4,495
Hall-Baker Co., No. 1-10 Tejon, Kern Co.	12-11-19	1,576	sd. sh. drlg.
Ohio Oil Co., No. 2 Tejon, Kern Co.	21-11-19	5,360	sd. sh. drlg.
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,527	redrlg.
Mohawk Pet. Co., No. 1 Cantua, Fresno Co.	30-16-15	5,991	sd. sh. drlg.
K. N. D. A., No. 4-18-J Kettleman North, Fresno Co.	18-21-17	9,095	hd. sd. drlg.
K. N. D. A., No. 25-20-J Kettleman North, Fresno Co.	20-21-17	7,171	br. sh. drlg.
K. N. D. A., No. 21-30-J Kettleman North, Fresno Co.	30-21-17	8,849	fishing
K. N. D. A., No. 52-30-J Kettleman North, Fresno Co.	30-21-17	8,023	hd. sd. drlg.
K. N. D .A., No. 58-28-J Kettleman North, Fresno Co.	28-21-17	7,945	redrlg. 7,830
K. N. D. A., No. 63-28-J Kettleman North, Fresno Co.	28-21-17	8,480	fish. D.P.
K. N. D. A., No. 83-24-H Kettleman North, Fresno Co.	24-21-16	8,935	P.B. 8,882
K. N. D. A., No. 81-32-J Kettleman North, Fresno Co.	32-21-17	6,552	br. sh. drlg.
K. N. D. A., No. 85-32-J Kettleman North, Fresno Co.	32-21-17	7,174	br. sh. drlg.
K. N. D. A., No. 52-34-J Kettleman North, Fresno Co.	34-21-17	7,675	hd. sd. drlg.
K. N. D. A., No. 72-34-J Kettleman North, Fresno Co.	34-21-17	8,150	test. W.S.O.
K. N. D. A., No. 47-2-P Kettleman North, Kings Co.	2-22-17	7,120	reaming
Standard Oil Co., No. 32-19-J Kettleman North, Fresno	19-21-17	8,836	redrlg. 8,307
Standard Oil Co., No. 8-19-J Kettleman North, Fresno	19-21-17	940	sd. sh. drlg.
Standard Oil Co., No. 72-19-J Kettleman North, Fresno	19-21-17	8,820	cleaning out
Standard Oil Co., No. 85-19-J Kettleman North, Fresno	19-21-17	6,390	sd. sh. drlg.
Standard Oil Co., No. 46-13-H Kettleman North, Fresno	13-21-16	8,975	hd. sd. drlg.
Standard Oil Co., No. 54-1-U Kettleman North, Kings	1-23-18	9,675	P.B. 8,260

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporary abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil Co., No. 48-35-J Kettleman North, Kings	35-21-17	8,018	reaming
Standard Oil Co., No. 46-19-V Kettleman Middle, Kings	19-23-19	7,778	cmtd. 7,752
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	4,791	gr. sd. drlg.
McBurney Oil Co., No. 1 Carriso, San Luis Obispo Co.	23-32-22	2,150	cmtd.
Foster, R. A., No. 1 Carriso, San Luis Obispo Co.	2-32-22	5,000	cleaning out
Jergins Trust, No. 1 Indian Knob, San Luis Obispo	26-31-12	911	sd. sh. drlg.
Calif. Producing Co., No. 1 Pattiway, San Luis Obispo	19-10-24	751	sd. sh. drlg.
United Oil Co., No. 2 Panorama, San Luis Obispo Co.	2-32-21	2,280	idle
Union Oil Co., No. 1 Huasna, San Luis Obispo Co.	22-32-15	3,430	br. sh. drlg.
Lewis, A. O., No. 1 Pecho, San Luis Obispo Co.	34-30-10	2,310	will deepen
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	3,262	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	3,250	rig. to pump
Cholame Synd., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,687	C.P. 3,300
Shell Oil Co., No. 1 Pleyto, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No. 2 Pleyto, Monterey Co.	34-24-10	5,025	sd. sh. drlg.
The Texas Co., No. 2 Eureka, Humboldt Co.	22- 3- 1	6,374	sd. sh. drlg.
Amerada Pet. Co., No. 3 Rio Vista, Solano Co.	26- 4- 2	5,786	sd. sh. drlg.
Associated Oil Co., No. 1 Sargent, San Benito Co.	5-12- 4	4,788	fish. D.P.
Seaboard Oil Co., No. 1 Alameda, Alameda Co.	13- 3- 3	5,760	sd. sh. drlg.
Standard Oil Co., No. 4 McDonald Island, San Joaquin	19- 2- 5	5,465	sd. sh. drlg.
Buttes Oilfields, Ltd., No. 1 Kent, Sutter Co.	2-15- 1	3,165	salt water

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Standard Oil Co., No. 1 Alondra, Los Angeles Co.	22- 3-14	7,563	hd. sh. drlg.
Richfield Oil Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	7,435	cmtd. 7,322
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	9,395	resume work
Listle, J. L., No. 1 Moneta, Los Angeles Co.	33- 3-14	7,352	fishing
C. C. M. Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	4,389	will P.B.
C. C. M. Oil Co., No. 8 Torrance, Los Angeles Co.	9- 4-14	3,635	pump. 35 b.d.
Southwest Pet. Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	3,560	O.S. drlg.
Black Gold Corp., No. 2 Torrance, Los Angeles Co.	6- 4-14	3,311	cleaning out
Nelson Pet. Co., No. 2 Torrance, Los Angeles Co.	18- 4-14	2,141	sd. sh. drlg.
Dumas-Lewis Oil Co., No. 3 Torrance, Los Angeles Co.	6- 4-14	3,247	cmtd. 3,247
Dearborn Pet. Co., No. 1 Torrance, Los Angeles Co.	16- 4-14	4,556	flow. 390 b.d.
Keystone Consd. Oil Co., No. 1 Redondo, Los Angeles	8- 4-14	3,000	sd. sh. drlg.
Standard Oil Co., No. 81 Inglewood, Los Angeles Co.	8- 2-14	2,631	sd. sh. drlg.
Universal Consd., No. 1 Gardena, Los Angeles Co.	36- 3-14	4,872	sd. sh. drlg.
West American, No. 1 Gardena, Los Angeles Co.	5- 4-13	6,861	redrlg. 6,540
Shell Oil Co., No. 86 Reyes Dominguez, Los Angeles	33- 3-13	4,540	sd. sh. drlg.
Shell Oil Co., No. 87 Reyes Dominguez, Los Angeles	33- 3-13	6,631	sd. sh. drlg.
Shell Oil Co., No. 88 Reyes Dominguez, Los Angeles	33- 3-13	2,980	sd. sh. drlg.
Union Oil Co., No. 42 Callender Dominguez, L. Angeles	33- 3-13	6,780	sd. sh. drlg.
Union Oil Co., No. 48 Callender Dominguez, L. Angeles	33- 3-13	3,170	sd. sh. drlg.
Union Oil Co., No. 50 Callender Dominguez, L. Angeles	33- 3-13	8,447	sd. sh. drlg.
Union Oil Co., No. 42 Hellman Dominguez, L. Angeles	33- 3-13	6,884	sd. sh. drlg.
Union Oil Co., No. 44 Hellman Dominguez, L. Angeles	33- 3-13	5,413	flow. 350 b.d.
Barnsdall Oil Co., No. 10 Rosecrans, Los Angeles Co.	20- 3-13	5,741	hd. sd. drlg.
Shell Oil Co., No. 1 Rosecrans, Los Angeles Co.	20- 3-13	1,530	sd. sh. drlg.
Calizoo Oil Co., No. 1 Compton, Los Angeles Co.	16- 3-13	3,875	milling
Eastern Oil Co., No. 1 Playa Del Rey, Los Angeles Co.	22- 2-15	7,562	rig. to pump
Sharby Oil Co., No. 1 Playa Del Rey, Los Angeles Co.	22- 2-15	7,154	sd. sh. drlg.
Union Oil Co., No. 15 D. R. Playa Del Rey, L. Angeles	27- 2-15	4,963	sd. sh. drlg.
Superior Oil Co., No. 1 Del Rey, Los Angeles Co.	25- 2-15	9,025	sd. sh. drlg.
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co.	28- 4-16	4,020	sd. sh. drlg.
Barnsdall Oil Co., No. 1 Newhall, Los Angeles Co.	26- 4-17	5,298	sd. sh. drlg.
Republic Pet. Co., No. 1 Ascot Park, Los Angeles Co.	24- 1-13	1,573	form. test
Sunset Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	3,640	cleaning out
Sunset Oil Co., No. 2 Wilmington, Los Angeles Co.	28- 4-13	3,559	pump. 90 b.d.
Selegna Oil Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	2,700	sd. sh. drlg.
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	5,091	P.B. 4,783
General Pet. Corp., No. 2 Wilmington, Los Angeles Co.	5- 5-13	2,674	cleaning out
Standard Oil Co., No. 90 Montebello, Los Angeles Co.	1- 2-12	3,100	swabbing
Richfield Oil Co., No. 2 Nutt Montebello, Los Angeles	5- 2-11	4,474	sd. sh. drlg.
St. Helens Pet. Co., No. 22 Montebello, Los Angeles Co.	2- 2-12	3,758	pump. 140 b.d.
St. Helens Pet. Co., No. 23 Montebello, Los Angeles Co.	2- 2-12	3,730	pump. 50 b.d.
Hathaway Co., No. 2 Fulton Santa Fe Springs, Los A.	6- 3-11	4,650	cleaning out
Union Oil Co., No. 34 Santa Fe Springs, Los Angeles.	6- 3-11	4,371	pump. 50 b.d.
Union Oil Co., No. 36 Santa Fe Springs, Los Angeles.	6- 3-11	5,200	pump. 150 b.d.
Union Oil Co., No. 100 Santa Fe Springs, Los Angeles	6- 3-11	7,425	will cmt.
Sibert Oil Co., No. 1 Santa Fe Springs, Los Angeles.	31- 2- 4	4,802	fish. D.P.
Julian & Criswell, No. 1 Walnut, Los Angeles Co.	5- 2- 9	1,350	sd. sh. drlg.
Associated Oil Co., No. 4 Huntington, Orange Co.	34- 5-11	4,250	cleaning out
Re-Mine Oil Co., No. 1 Huntington, Orange Co.	34- 5-11	3,738	bailing
W. C. W. Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,317	reaming
Kohlbush, H. S., No. 1 Huntington, Orange Co.	34- 5-11	4,205	sd. sh. drlg.
Dunlap, D. D., No. 4 Huntington, Orange Co.	2- 6-11	3,180	sd. sh. drlg.
Terry, George, No. 2 Crane Huntington, Orange Co.	2- 6-11	2,000	reblde. rig
Vicaroo Oil Co., No. 1-A Huntington, Orange Co.	12- 6-11	4,797	sd. sh. drlg.
The Petroleum Co., No. 4 Huntington, Orange Co.	2- 6-11	2,265	sd. sh. drlg.
Car-Fad Oil Co., No. 2 Huntington, Orange Co.	2- 6-11	1,580	sd. sh. drlg.
Hammil Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,075	cmtd. 4,075
South Basin Oil Co., No. 93 Huntington, Orange Co.	2- 6-11	3,990	sd. sh. drlg.
Elliott Oil Co., No. 1 Huntington, Orange Co.	34- 5-11	3,950	reaming
Lucky Strike Oil Co., No. 7 Huntington, Orange Co.	2- 6-11	3,352	redrlg. 2,085
Miley, E. J., No. 1 Huntington, Orange Co.	34- 5-11	1,961	sd. sh. drlg.
Richfield Oil Co., No. 10 Fidelity Huntington, Orange	34- 5-11	3,597	sd. sh. drlg.
Richfield Oil Co., No. 1 Crowell Huntington, Orange	34- 5-11	4,650	resume work
Commander Oil Co., No. 1 Newport, Orange Co.	29- 6-10	3,230	br. sh. drlg.
Shell Oil Co., No. 18 Brea, Orange Co.	2- 3-10	5,276	redrlg. 4,196
Shell Oil Co., No. 19 Brea, Orange Co.	2- 3-10	5,097	P.B. 4,723
Standard Oil Co., No. 2-5 Coyote, Orange Co.	22- 3-10	4,040	sd. sh. drlg.
Oil Conservation Co., No. 1 East Coyote, Orange Co.	17- 3- 9	2,814	test. W.S.O.
Graham & Loftus, No. 1 East Coyote, Orange Co.	18- 3- 9	1,971	sd. sh. drlg.
Bartholomae Oil Co., No. 3 East Coyote, Orange Co.	22- 3-10	3,220	reaming
West Coast Ref. Co., No. 1 Santa Ana, Orange Co.	25- 3- 9	2,362	sd. sh. drlg.
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3- 9	8,610	fish. D.P.
Union Oil Co., No. 33 Chapman Richfield, Orange Co.	29- 3- 9	4,885	P.B. 4,450
Union Oil Co., No. 37 Chapman Richfield, Orange Co.	29- 3- 9	3,498	pump. 140 b.d.
Union Oil Co., No. 38 Chapman Richfield, Orange Co.	29- 3- 9	3,323	cmtd. 3,286
Standard Oil Co., No. 2-11 Kraemer Richfield, Orange	30- 3- 9	4,100	sd. sh. drlg.
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co.	31- 3- 9	4,925	fish. D.P.
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10- 5	2,812	hd. sd. drlg.

KANSAS

Week Ending December 5 (Descriptions are East unless marked otherwise)

Barber County

Pure Oil Co. No. 1 Palmer, SE NE SW sec. 10-33-10w. Drlg. 2,821 ft.

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. Miss. 4,807 ft. (cor.); Viola 5,105 ft.; Simpson 5,235 ft.; Wilcox 5,252 ft.; Sil. 5,331 ft.; T.D. 5,529 ft.; P.B. to 4,879 ft.; acidized.

Barton County

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. Anhy. 785 ft.; U.R. 8-in. at 2,067 ft.

Duwe & Brouk No. 1 Baker, NE SE SW sec. 16-17-13w. Drlg. 317 ft.

Freehorn et al No. 1 Sooy, NW NW NE sec. 27-18-12w. Rig.

Indian Terr. Illm. Oil Co. No. 1 Schrapel, SE SE NE sec. 26-20-11w. B.R.R.

Minnehoma Oil & Gas Co. No. 1 Smith, NW NW NE sec. 20-18-13w. 12-in. at 791 ft. W.O.C.

S. L. Parks No. 1 Peach, SE cor. sec. 24-16-14w. R.U.S.T.

C. L. Price No. 1 Deutsch, NW NW NE sec. 16-16-13w. Topeka 2,820 ft.; Oswald 3,135 ft.; Siliceous 3,373-75 ft.; 2,000 ft. O.I.H. in 10 days.

Butler County

Ralph Wixson et al No. 1 Coulter, NW SW NE sec. 3-27-7. Drlg. 1,089 ft.

Chase County

Propp et al No. 1 Fromm, SE cor. sec. 29-18-9e. Set 6-in. pipe at 2,420 ft. Drlg. 2,422 ft.

Chautauqua County

Union Gas Co. No. 8-A Wilson, NE SW NE sec. 14-33-12. Sil. and T.D. 1,819 ft. Flowed 65 bbls. an hr.; S.I. to 50 bbls. per day. Comp.

Cowley County

Austin & McKnabb No. 1 Wilson, NE NE SE sec. 20-32-6. Drlg. 175 ft.

C. H. Cross No. 1 Cook, SW cor. sec. 8-32-6. Drlg. 685 ft.

Home Natural Co. & McNish No. 2 Werner, SE SE SW sec. 31-32-6. Chat 3,068-87 ft.; S.O. 3,130-32 ft. and 3,140-42 ft. T.D. 3,190 ft. P. B. to 1,900 ft.

Tom Palmer No. 1 Pierce, SE SE SW sec. 14-31-3e. 15-in. csg. at 150 ft.; W.O.C.

Simpson Oil Co. and Stanolind O. & G. Co. No. 1 Weigle, SW SW NE sec. 18-31-6. B.R.

Wakefield et al No. 1 Beekman, NW NW SE sec. 26-32-3. 8-in. 2,240 ft. Drlg. 3,200 ft.

Decatur County

Winkler & Koch No. 1 Vessey, C NW SE sec. 26-3-26w. Fsg. 2,135 ft.

Edwards County

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Whipstock 4,322 ft.; 5-in. 4,578 ft. (cor.); drlg. 4,593 ft.

Ellis County

H. Jones Bros. et al No. 1 Phillips, SE SE NW sec. 9-15-17w. Anhy. 1,101 ft. Drlg. 1,210 ft.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Base K.C. 3,640 ft.; Sil. 3,675 ft.; S.S.O. 3,675-83 ft. Drlg. 3,694 ft.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. Anhy. 965 ft.; drlg. 2,125 ft.

Loomis & Etyner No. 1 O'Laughlin, SE SE NW sec. 27-13-18w. Rotary rig.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. Set 15-in. csg. 759 ft.; Fsg. 815 ft.

G. M. Piggott et al No. 1 Homburg, C NE sec. 33-11-20w. Anhy. 1,595 ft. Drlg. 2,933 ft.

Taylor et al No. 1 Emery, NE NE NE sec. 23-14-18w. Anhy. 1,162 ft.; K.C. 3,285 ft.; Sil. 3,558 ft.; 4 bbls. oil per hr. 3,566-68 ft.; T.D. 3,570 ft.; 1,300 ft. W.I.H. and 450 ft. O.I.H.; dumped one sack cement; W.O.C.

Winkler & Koch No. 1 Jensen, SW SW NE sec. 3-13-18w. Rig.

Ellsworth County

Empire O. & R. Co. No. 1 Brown, SE SE NW sec. 1-17-9w. M.I.M.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Set 8-in. csg. 2,500 ft.; 3,000,000 ft. gas 2,808 ft.; T.D.; C.O.

Greenwood County

Dunn & Lewis No. 2 Dawson, C NE NE sec. 27-26-13e. T.D. 1,200 ft. D.&A.

Estes et al No. 1 Edgar, NW NW SE sec. 1-28-8. O.W.D.D.; Peru 1,750-1,848 ft. D.&A.

Hollis et al No. 1 Boone, NW NE NE SW sec. 21-26-12. M.I.M.

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Miss. 2,122 ft.; pay 2,154-61 ft.; 300 ft. O.I.H. in 48 hrs.

Ohio Oil Co. No. 1 Schwab, SE SW SE sec. 9-24-10. Loc.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. Chat 3,160 ft.; S.D. 3,350 ft.

Inca Prod. Co. No. 1 Moore, C NE NE sec. 25-24-3w. S.D. 2,860 ft.

Saco et al No. 1 Guthrie, NE NE NW sec. 8-22-2e. S.D. 2,090 ft.

Haskell County

Helmerich & Payne No. 1 Meredith, C SW sec. 10-30-33w. R.U.R.

Kearney County

J. L. Murphy No. 1 Campbell, NW NW SW sec. 32-25-35w. Anhy. 1,900 ft.; T.D. 2,595 ft.

Logan County

Rose Spring Drlg. Co. et al No. 1 Wright, C SE SE sec. 12-15-35w. Drlg. 3,375 ft.

Lyon County

Clyde Fred et al No. 1 Bruce, NW cor. sec. 18-18-10. R.U.M.

Marion County

Western Kansas Oil & Ref. Co. et al No. 1 Hauser, SW cor. sec. 19-19-4. Drlg. 1,765 ft.

Meade County

Pacific Midwest Co. No. 1 Rexford, NE SE SW sec. 8-30-29w. R.U.

Mitchell County

Geo. Siedhoff et al No. 1 Greiss, SW SW SE sec. 16-8-10w. Drlg. 560 ft.

Ness County

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. 10-in. 1,942 ft.; S.D. 2,717 ft.

Sayre Oil Co. et al No. 1 Rversee, C NE SE sec. 34-18-21w. Viola 4,455 ft.; Sil. 4,670-96 ft.; D.&A.

Pawnee County

Kessler & Thier et al No. 1 Shea, NE NE NE sec. 22-21-17w. Sil. 3,881 ft. Drlg. 4,023 ft.

Pratt County

H. V. Elwell et al No. 1 Fay, NW NW SE sec. 15-27-14w. Fsg. 3,500 ft.

Reno County

Carlock et al No. 1 Brown Realty Co., NW NW NE sec. 32-22-10w. Rig.

Empire O. & R. Co. No. 1 Schrock, NW NW SE sec. 22-24-5w. Set 12-in. 490 ft.; W.O.C. 920 ft.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. Fsg. 3,685 ft.

Miller et al No. 1 Detter, NE SE SW sec. 28-22-7w. Chat 3,525 ft.; S.O. 3,530 ft.; S.O.&W. 3,554-64 ft. Drlg. 3,583 ft.

Clyde Pulse No. 1 Payne, SW NW NE sec. 4-22-7w. S.D. 1,940 ft.

Torry & Feaster No. 1 Schroeder, SE cor. sec. 1-23-7w. B.R.

Westgate-Greenland Oil Co. No. 1 Fossey, SW SW SE sec. 12-22-8w. Chat 3,566-75 ft. T.D. 3,577 ft. S.O. and 1,000 ft. W.I.H.

Rice County

Aylward et al No. 1 M. A. Johnson, NW NW NE sec. 17-21-7w. Cong. 3,358-60 ft. S. O.; 8-in. at 3,358 ft. R.U.S.T.

Buckley No. 1 Bailey, SW SW NW sec. 19-20-6w. Rig.

Carlock et al No. 1 Deweese, SW NW NW sec. 32-20-7w. K.C. 2,895 ft.; Cong. 3,315 ft.; 300 ft. O.I.H. in 12 hrs. at 3,333 ft.; Chat 3,355-57½ ft.; S.D.O.

Charles Pet. Corp. No. 1 Speck, NW NW SE sec. 29-20-8w. F.I.H. 200 shots 3,311-20 ft.; small inc.

Dickey Oil Co. No. 1 Brothers, SE cor. sec. 1-21-7w. B.R.R.

Hanna et al No. 1 Brothers, SE SE NW sec. 25-20-8w. Rig.

Indian Terr. Ill. Oil Co. No. 1 Fossey, SW SW SW NE sec. 31-20-10w. Drlg. 815 ft.

Sage et al No. 1 Patton, SW cor. sec. 5-21-7. Cong. 3,329-37 ft.; T.D. 3,342 ft.; 6-in. liner at 3,337 ft. Producing 200 bbls. daily.

Shell Pet. Corp. et al No. 1 Soeken "A," C NW sec. 10-19-9w. Sil. 3,300-09 ft., T.D.; packer 3,294 ft.; tested 105 ft. sulfur wtr., 5 ft. drlg. mud, in 16 min.; P.B. 3,010 ft.

Rooks County

Buckner & Schoff No. 1 McConnel, NE cor. sec. 34-6s-18w. Anhy. 1,418 ft. Drlg. 1,460 ft.

Empire Oil & Ref. Co. No. 1 Ham, SW NW NW sec. 24-8-19w. Anhy. 1,389 ft.; fsg. 2,810 ft.

Graham et al No. 1 Fike, SW cor. sec. 9-9-17w. Drlg. 1,510 ft.

Jarvis & Strickler No. 1 Hamel, SE SE SW sec. 7-8-20w. Anhy. 1,503 ft.; Topeka 2,979 ft.; K.C. 3,182 ft.; Sil. 3,501 ft.; Cd. 3,503-20 ft. S.W.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. S.D. 3,422 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. T.D. 3,591 ft.; P.B. to 2,806 ft.; pmpd. 25 B.O. and 100 B.W.

Snowden & McSweeney No. 1 Hindman, C E½ NW sec. 35-17s-17w. Anhy. 1,237 ft.; 10-in. 1,240 ft.; W.O.C.

Rush County

G. M. Piggott et al No. 1 Maresch, C NW NW sec. 28-19-19w. Loc.

Schoenfeld & Kitch No. 1 Winget, SE cor. sec. 15-16-16w. 12-in. csg. 1,059 ft. C.O.

Russell County

Empire O. & R. Co. No. 1 Frederick, SE cor. sec. 18-15-11w. Drlg. 700 ft.

Equity Gas Co. No. 1 Harbaugh, NW NE SW sec. 19-13-12w. S.D. 470 ft.

Saline County

Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. Miss. 2,815 ft.; H.F.W. 2,860-75 ft. Drlg. 3,004 ft.

Sedgwick County

Cameron et al No. 1 Smith, SW SE SE sec. 13-27-2e. Spudded and S.D.

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. Siliceous 3,613 ft.; drlg. 4,675 ft.

R. J. Wallace et al No. 1 Scheer, SW cor. sec. 22-27-3w. S.O. 3,145 ft.; base K.C. L. 3,265 ft.; Chat 3,690 ft.; Viola, 4,162 ft.; Simpson 4,182 ft.; Siliceous 4,270 ft.; T.D. 4,285 ft. R.U.S.T.

Seward County

Helmerich & Payne No. 1 Hyde, C SW sec. 14-31-34w. R.U.

Scott County

C. R. Blackman et al No. 1 Nolan, NW NW NE sec. 13-19-33w. Loc.

Sheridan County

O. A. Roberts et al No. 1 Corrick, C NW sec. 34-9-26w. Set 15-in. csg. 124 ft.; W.O.C.

Smith County

Helmerich & Payne No. 1 Meyer, C NE SW sec. 10-5-11w. Sil. 4,143 ft.; T.D. 4,161 ft., sulfur odor; D.&A.

Stafford County

Atlantic Ref. Co. et al No. 1 Davis, SE SE SW sec. 32-23-12w. Viola 3,790 ft. Drlg. 3,880 ft.

Empire Ref. Co. et al No. 1 Jordon, SW SW NW sec. 15-25-14w. K.C. 3,640 ft., pay 3,722-27 ft.; 2,900 ft. O.I.H. in 15½ hrs.

Skelly Oil Co. et al No. 1 Kipp, S. SE NE sec. 27-25-14w. Viola 4,107 ft. Drlg. 4,157 ft.

C. E. Skiles et al No. 1 Hughes, SW cor. sec. 12-23-12w. S.D. 175 ft.

E. Skiles No. 1 Leidigh, NW NW SW sec. 21-22-11w. K.C. 3,260 ft.; S.O.&G. 3,300-05 ft.; S.W. 3,340-55 ft.; H.F.W. 3,375 ft.; 6-in. 3,420 ft. C.O.

C. H. Lebow et al No. 1 Wolk, SE SW NW sec. 3-21-12w. Skidded rig; set 10-in. at 186 ft. Drlg. 1,110 ft.

Sumner County

Empire O. & R. Co. No. 1 Hoffman, NW NW SW sec. 27-34-1e. Drlg. 2,585 ft.

Graham et al No. 1 Dawson, NW NW NW sec. 4-33-2w. K.C. 3,238 ft. Drlg. 3,305 ft.

Hapenny & Green et al No. 1 Evers, SE SE NE sec. 27-31-2. S.D. 519 ft.

Lario O. & G. Co. et al No. 1 Hall, NW SW NW sec. 11-35-1e. Drlg. 1,105 ft.

W. C. McBride, Inc. & Olson Drilling Co.

No. 1 Kinlund, NE NW NE sec. 24-34-1e. Layton 2,892 ft.; Chat 3,538 ft.; based Miss. 3,770 ft.; Sil. 3,894 ft.; Schlumberger test dry; T.D. 3,908 ft. D.&A.

Orcott & Stewart No. 1 Newton, SE cor. sec. 21-30-2. O.W.W.D. Drlg. 605 ft.

Rose Spring Drlg. Co. et al No. 1-A Rutter, C NW NW sec. 21-33-2e. Chat 3,215-25 ft.; R.U.S.T.

Lloyd, Study & Frost et al No. 1 fee, SE cor. sec. 31-34-1e. R.U.R.

Trego County

York State Oil Corp. No. 1 Gugler, SW cor. sec. 36-12-21w. Sil. 3,830 ft.; pay 3,-837-39 ft.; P.B. to 3,832 ft.; cmtd. 5-in.; W.O.C.

Black Gold Oil Co. No. 1 Allman, C SW SW sec. 34-14-21w. Loc.

Woodson County

Dwyer et al No. 1 Wolf, NE NE SW sec. 9-24-14. S.D. 1,340 ft.

Nigh & Kilby No. 1 Hogueland, SW SE NE sec. 3-24-15. Pay 1,494-96 ft. 1,200 ft. Q.I.H.

Ross & Marshall No. 1 Bresner, SW SW SE sec. 6-26-15. M.I.M.

OKLAHOMA

Week Ending December 5

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1 Biscoe, SW SW SW sec. 28-8-22w. T.D. 1,080 ft. S.D.

Cleveland County

Helmerich & Payne, Inc. No. 1 Glenn, C NW NE sec. 6-8-1w. Pawhuska 3,180 ft. Drlg. 4,400 ft.

W. R. Hollenbeck No. 1 Norman, NW NW NE sec. 17-9-2w. Rig.

Coal County

Carter Oil Co. et al No. 1 Warne, NE NE NW sec. 31-3-9. Sylvan 5,098 ft.; Viola 5,220 ft.

Continental Oil Co. No. 1 Breedlove, NW SW SW sec. 24-1-8. Woodford 4,612 ft. Drlg. 4,800 ft.

Continental Oil Co. No. 1 Daniels, SW NE SW sec. 27-1-9. Drlg. 4,949 ft.

Continental Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Hunton 4,354 ft.; Sd. L. 5,385-5,400 ft. and 5,403-20 ft., showing dead oil; McLish. 5,452 ft.; Sd. 5,520-25 ft. Drlg. 5,610 ft.

Continental Oil Co. No. 1 W. Kirby, SW SE SW sec. 23-1n-8e. Drlg. 1,031 ft.

Shell Pet. Corp. No. 4 HPI-A. NW sec. 30-3-10. Woodford 5,087 ft.; Hunton 5,252 ft. Drlg. 5,322 ft.

Creek County

M. W. Mosier et al No. 1 Holcomb, SE SW NW sec. 19-18-8. Layton 1,605-95 ft.; Jones 1,835-50 ft.; Cleveland 1,985-2,010 ft.; S.G.; Prue 2,505-50 ft.; sd. 2,-559-60 ft.; S.O.; 6-in. at 2,545 ft.

Garfield County

Ohio Oil Co. No. 1 McFarland, SE SE SE sec. 25-24-3w. Big Lime 4,190 ft; Chat, 4,595 ft. Drlg. 4,667 ft.

Ohio Oil Co. No. 1 Smythe, NE NE SW sec. 23-22-4w (Wilcox sd. test), Viola 4,-879 ft.; Simpson 4,910 ft.; first Wilcox 4,968-5,020 ft.; second Wilcox 5,070 ft.; Tyner 5,193 ft.; Arbuckle 5,358 ft.; T.D. 5,449 ft.; P.B. 5,200 ft.; Halliburton test, wtr.; P.B. 2,365 ft.; Swb. 25 bbls. oil, 25 bbls. wtr., 8 hrs.

Garvin County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2n-3w. Drlg. 4,835 ft.

Hayes Drlg. Co. No. 1 Howell, NW SE NW sec. 34-1-1. T.D. 160 ft.; to deepen.

Pure Oil Co. No. 1 Baker, NE cor. sec. 7-2-1e. Oil Creek sd. 5,155 ft; Cd. 5,166-76 ft.; rec. 7 ft. L. and sh., 1½ ft. sd., slightly salty; top sd. 5,174 ft. Drlg. 5,245 ft.

Greer County

Bud Lewis et al No. 1 Webster, SW NE NE NE sec. 7-7-24w. Drlg. 1,002 ft., sdy. sh.

Neff-Godfrey-Andrea No. 1 Melton, SE NW SE sec. 16-3n-22w. Loc.

Hughes County

W. W. Bussett No. 1 Field, C NW SW sec. 11-9-11. R.U.S.T.

R. K. Ellison No. 1 Peters, SE NW SE sec. 8-6-10. Booch 2,765 ft.; drlg. 3,390 ft.

McAdams & Barnes No. 1 Koch, SW NE NE sec. 1-9-10. T.D. 3,823 ft.; P.B. 3,710 ft; whipstock, 3,778 ft.

Mid-Western Prod. Co. No. 1 Hill C SE NW sec. 13-9-9. T.D. 1,300 ft. Set 12-in. csg.

Olympic Oil Co. No. 1 Dunn, SE NW SE sec. 11-7-8. T.D. 1,842 ft. Pumped 20 B.O.; comp.

Southern Oil Co. No. 1 Buck, C NW SW SW sec. 21-8-10. R.U.S.T.

Kay County

G. A. Brown et al No. 1-A Harris, SW SW NE sec. 14-25-1e. Cellar.

Helmerich & Payne No. 1 Constant, SW SW NE sec. 17-28-2w. R.U.

Max Kelley No. 1 Johns, NW NW NW sec. 35-27-4. Skinner 3,016-24 ft., dry; Bartlesville 3,036 ft. T.D. 3,107 ft. In sd. To deepen.

Kiowa County

Argus Pet. Co. No. 1 Osborne, NW cor. NE sec. 9-7-16w. L. 1,180 ft. S.D. 1,225 ft. T.D.

Burns & Moore No. 1 Block, NW NE SW sec. 31-6-16w. S.D. 50 ft.

Lykins et al No. 1-A Aetna Life, SE cor. sec. 8-5-16w. T.D. 851 ft.; S.D.

Travis & Scott No. 1 Doyle, NE SE SW sec. 21-5-17w. T.D. 939 ft.; machine moved out.

Latimer County

Cheyenne Oil Co. No. 1 Wilson, C SE SE sec. 15-5-18. Sd. 2,248-60 ft.; S.O.; drlg. 2,790 ft.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-22. 10-in. 2,246 ft.; T.D. 2,340 ft.; U.R.

Lincoln County

Fleetborn Oil Corp. No. 1 Turner, NW NW SE sec. 28-17-5. Layton 2,284 ft.; S.G.; B'ville 3,508 ft.; first Wilcox 3,953-67 ft.; est. 4,000,000 ft. gas, no oil, on D. S.T.; second Wilcox 3,985-86 ft.; T.D.; no show; 7-in. 3,981 ft.; to D.D.

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. T.D. 4,651 ft. in sd.; P.B. to 4,588 ft.; 83,300,000 ft. gas; comp.

Logan County

Anthony & Marshall No. 1 Fruin-Eckman, SE SE SW sec. 4-16-1e. C.O. 4,955 ft.

Harry Blackstock No. 1 Prince, SE NE SW sec. 11-17-3w. Loc.

Helmerich & Payne et al No. 1 Hasler, NW NW SE sec. 14-16-4w. Oread 3,740 ft.; Tonkawa 4,130 ft.; Checkerboard 5,-130-75 ft. Drlg. 5,514 ft.

McIntosh County

Stanolind Oil & Gas Co. et al No. 1 Tiger, NW NW SW sec. 13-9-15. T.D. 4,993 ft.; D.&A.

Muskogee County

A. D. Spears et al No. 1 Robbins, NW cor. sec. 20-15-20. Turkey Mt. sd. 1,677-84 ft.; Arbuckle 1,710 ft.; T.D. 1,811 ft.; S.S.O.; S.D.

Noble County

Shell Pet. Corp. No. 1 Moelling, C SW NW sec. 31-21-2w. Viola 5,278 ft.; Dense 5,315 ft.; Dol. 5,338 ft.; 1st Wilcox 5,373 ft. Cd. to 5,384 ft. S.O.&G.

Taylor & Lindsey et al No. 1 Aetna Life, SE SE NW sec. 1-23-2w. 15-in. at 67 ft. W.O.C.

Okfuskee County

Harvey Oil Co. No. 1 Stewart, NE cor. sec. 28-10-9. Set 10-in. csg. at 61 ft.; S.D.

Osage County

Chavalier & Simon No. 1 Osage, SE cor. sec. 24-23-9. T.D. 2,309 ft. S.D.

Pawnee County

Forest Dev. Corp. No. 1 Otter, NE NW sec. 15-21-5. Bartlesville 3,173 ft.; Cd. 3,180-3,225 ft.; S.O.&G.; R.U.S.T.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. Sand 3,398 ft.; drlg. 4,238 ft.

Pontotoc County

Caloma Oil Corp. No. 1 Brentz, SE NE SW sec. 4-1-6. S.D. 503 ft.

W. A. Delaney and Boettcher O. & G. Co. No. 2 Alexander, SW NE SW sec. 24-4-7. O.T.D. 3,520 ft.; C.O.

E. H. Moore et al No. 1 Muse, SW NE SE sec. 33-2n-7. Loc.

Ramsey Pet. Co. No. 1 Johnson, NW SW SE sec. 9-3-7. R.U.R.

Seminole County

Amerada Pet. Corp. No. 1 Yarhola, NE NW NW SE SE sec. 12-6-6. Sand 2,290-2,301 ft.; oil stain; Cromwell sd. 2,903 ft.; S.W.; to P.B.

Riverland O. & G. Co. No. 1-A Goebelt, NW SE SE sec. 12-6-6. Sd. 2,290-2,301 ft., oil stains; Cromwell 2,903 ft. T.D.; water; to P.B.

A. I. Spears No. 1 Keaton, NW cor. sec. 6-5-8. Rig.

Texas County

Allison & Barnhill No. 1 Bingley, SE SE NE sec. 30-2n-18. (Cimmaron Meridian). Drlg. 2,200 ft.

SOUTHERN OKLAHOMA

Atoka County

A. J. Sanders No. 3 Redden, SE SW SW sec. 19-1n-15e. Sdy. L. 910 ft.; cd. to 932½ ft.; bailed to 60 ft. off bottom; rainbow S.O.

Carter County

Head & Straus No. 1 Simpson & Fell, NW NW SE sec. 5-1s-3w. Drlg. 1,232 ft.

Comanche County

Frank Scott No. 1-A Kuntz, SE NE SE sec. 21-4-11w. Drlg. 1,462 ft.

L. D. Wise No. 1 Cones, SE SE SW sec. 11-1n-10w. T.D. 2,156 ft.; S.D.

Cotton County

Phillips Pet. Co. No. 1 Warren, C NE NE SE sec. 1-5s-13w. Canyon series 2,160 ft.; L., 2,240 ft. Drlg. 3,020 ft.

Grace-Wood Drlg. Co. No. 1 Wilson, C SW NW sec. 17-4s-11w. Cisco 2,997 ft.; Canyon 3,660 ft. Drlg. 3,730 ft.

Harmon County

Lloalko Trust, Ltd. No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,980 ft.; S. D.O.

Jefferson County

Massad & Swansberger No. 1 Barrett, NE cor. SE SE sec. 14-6s-6w. T.D. 21 ft.; S.D.

Mid-Continent Oil Co. No. 1 Reid, C SW NW sec. 32-6s-4w. T.D. 1,807 ft., contract depth.; S.D.O.

Johnston County

Patton et al No. 1 McCrummens, SW SW NE sec. 16-1s-6e. T.D. 580 ft.; S.D. for csg.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; perforated csg. at 1,539-99 ft. and 2,095-2,115 ft.; cmtd. perf.; flwd. 22 bbls. in 24 hrs. and "went dead"; S.D.O. Aug. 4.

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. T.D. 4,009 ft.; waiting for tools; will deepen.

Sinclair Prairie Oil Co. No. 1 Stockton, SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; cut 5-in. csg. at 7,109 ft.; P.B. to 6,927 ft; swabbed 342½ B.O. in 5 days; swbg.

Marshall County

Magnolia Pet. Co. No. 1 Gardner, NE NE NW sec. 34-6s-6e. Sycamore 1,440 ft.; Woodford 1,675 ft. Drlg. 1,855 ft.

Murray County

Power Oil Co. et al No. 1 Lancaster Trust, C SW NE sec. 10-1s-2e. Woodford 2,630 ft.; Hunton 2,951 ft.; 7-in. csg. 2,952 ft.; drlg. L. 3,093 ft.

J. Ben Russell No. 1 fee, SE SE NW SE sec. 9-2s-3e. Drlg. 65 ft.

Stephens County

Jack Cohen No. 1 Pierce, NE NE NW sec. 24-2s-6w. Drlg. 235 ft.

Coline Oil Co. No. 1 Johnson, SW SE NE NE sec. 1-2n-8w. Drlg. 4,790 ft.

H. J. Edwards No. 1 Frederick, SW cor. NE SE NW sec. 31-2n-8w. T.D. 1,995 ft. S.D. for repairs.

Ed Parson No. 1 Olson, C SW SW sec. 21-2-8w. Cd. and drilled 5,822 to 5,885 ft.; rec. dry L. and sd. Drlg. 5,910 ft.

Tillman County

Indian Terr. Ill. Oil Co. No. 1 Hatler, C SW NE sec. 32-2s-17w. T.D. 3,816 ft. Tested S.W. with small show of oil; P.B. to 3,813 ft.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. Granite Wash 1,275-78 S.O.; T.D. 1,314 ft. S.D.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Rodessa

Ark.-La. Gas Co. No. 2 Teamer, NW SE SW sec. 13-23-16. P.B. to 2,090 ft.; drlg. 2,125 ft.

J. G. Collins No. 2 Caddo School Bd., sec. 8-23-15. Cg. 5,920 ft.

Idessa Oil Co. No. 1 D. K. Sumner, NW SW SE sec. 10-23-15. T.D. 6,197 ft.; swbd. dry; W.O.

J. Edward Jones No. 1 M. Z. Sharp, 1,227 ft. N, 330 ft. E, SW cor. SE¼ sec. 4-23-16. Comp.; flw. 205 bbls. 24 hrs.; T.D. 6,035 ft.

Lion Oil Co. No. 5 Wynn, 330 ft. N, 2,310 ft. E, SW cor. sec. 9-23-15. Comp.; flw. 105 B.P.H.; T.D. 6,040 ft.

Lion Oil Ref. Co. No. 6 Wynn, NE SW SE sec. 9-23-15. Drlg. 3,704 ft.

Lion Oil Ref. Co. No. 7 Wynn, NE SW sec. 9-23-15. Drlg. 3,425 ft.

Magnolia Pet. No. 9 J. E. George, John Collom Sur. Drlg.

McAlester Fuel Co. No. 2 N. S. Tyson, C sec. 22-23-16. Perf. csg. 5,976-80 ft.; tstg.

R. W. Norton No. 4 J. T. Moore, Wm. R. Myers Sur. R.U.

R. W. Norton No. 1 Payne, C SE SE sec. 27-23-16. Drlg. 5,655 ft.

R. W. Norton No. 2 Starke, 660 ft. N and E, SW sec. 16-23-16. Loc.

Phillips Pet. Co. No. 2 Interstate, 330 ft. S and W, NE NW sec. 16-23-15. Drlg. 5,254 ft.

Phillips No. 3 Rose McDonald, NE cor. sec. 17-23-15. Drlg. 2,253 ft.

Snowden & Anding No. 3 Taylor, C W½, Lot 9, Blk. 46, sec. 23-23-16. Comp.; flw. 6 B.P.H.; 8,000,000 ft. gas; T.D. 5,952 ft.

Standard Oil of La. No. 1 Farmer, SW NW SW sec. 7-23-15. 7-in. cmt. 6,072 ft.; T.D. 6,088 ft.; W.O.C.S.

United Gas No. 4 fee, NW NW SE sec. 16-23-16. Comp.; flw. 23 B.P.H.; T.D. 5,-993 ft.

United Gas No. 3 Gibson Unit, 656 ft. N and E, SW SW NW sec. 15-23-16. Drlg. 4,800 ft.

United Gas No. 4 Harris, NW NW SE sec. 15-23-16. Cg. 5,855 ft.

United Gas No. 2 McCoy, 656 ft. N and W, SE SE NE sec. 16-23-16. Drlg. 5,-488 ft.

United Gas No. 26 Rodessa O. & Ld. Co., NW SW NE sec. 15-23-16. Comp.; flw. 17 B.P.H.; T.D. 6,002 ft.

United Gas No. 5 W. B. Spearman, NW SW sec. 15-23-16. Comp.; flw. 13 B.P.H.; T.D. 5,985 ft.

N. LOUISIANA WILDCATS

Bienville Parish

DeSoto O. & G. Co. No. 1 Dunn and Olsen, C N½ NW¼ sec. 15-16-10. T.D. 4,-480 ft.; tstg. S.W.; W.O.

Lide & Greer No. 1 Smelley, 220 ft. N, 160 ft. W, SE SW NE sec. 13-16-5. T.D. 300 ft.

Seaboard No. 1 McGee, 660 ft. N and E, C sec. 3-16-6. O.W.D.D.; T.D. 5,905 ft.; wsg. to bottom.

Bossier Parish

Ark.-La. No. 1 W. H. Davis, 660 ft. S, 1,-270 ft. E. NW NE NW sec. 8-17-11. Drlg. 1,150 ft.

Ark.-La. Gas No. 1 P. Potter, SW sec. 8-17-11. R.U.

Premier Inv. Co. No. 38 Wyche, NE NW NW sec. 14-19-11. T.D. 350 ft.; sd.; tstg.

Tidwell et al No. 1 Natting, sec. 15-22-14. 7-in. cmt. 5,965 ft.; T.D. 2,971 ft.; W. O.C.S.

United Gas No. 1-G H. L. Skannal, NE SE NE sec. 22-17-12. Cg. 5,127 ft.

Caddo Parish

Bayou State No. 3 S. Jolly, 700 ft. S and E, NW NW SW sec. 22-22-15. 6-in. cmt. 1,021 ft.; T.D. 1,032 ft.

C. C. Crews No. 2 Pender, NW SW sec. 11-20-15. Comp.; flw. 50 B.P.D.; T.D. 2,202 ft.

W. D. Chew No. 1-D Levee Bd., NW SE NE sec. 34-21-16. T.D. 932 ft.; W.O.S.R.

W. D. Chew No. 2 U. S. Govt., NW cor. sec. 5-20-15. Drlg. 944 ft.

Custer Oil Co. No. 1 Wemple, N½ NW sec. 14-20-15. T.D. 200 ft.; S.D.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Drlg. 7,257 ft.

Lawrence Potter No. 1 Head, NE NE sec. 26-21-15. S.D. 665 ft.

F. L. Luckett No. 1 Connell, SW NE sec. 10-20-15. T.D. 2,105 ft.; rg. csg.

Maja Oil Co. No. 1 Hyman, 950 ft. W, 860 ft. N, SE cor. sec. 10-20-15. Drlg.

Prairie River Synd. No. 1 Hutchinson, SW NW sec. 15-15-12. T.D. 7,377 ft.; D.&A.

Matt M. Press No. 1 Keller, SE cor. sec. 10-20-15. 6-in. cmt. 2,190 ft.; T.D. 2,-200 ft.

Producers O. & G. Co. No. 2 Currie, NE SE sec. 32-19-16. T.D. 950 ft.; W.O.

Rodgers et al No. 1 Thompson, NW SW SW sec. 11-20-15. Drlg.

Morefield & Prine No. 3 Stokeley, sec. 5-20-16. 6-in. cmt. and perf.; T.D. 957 ft.; W.O.C.S.

Shreveport Oil Co. No. 8-B Muslow, SW NW sec. 4-20-15. 6-in. cmt. 2,150 ft.; T.D. 2,165 ft.

Simplex No. 5 Natalie, SE W½ SE sec. 10-20-15. T.D. 2,197 ft.; tstg.

Stanolind O. & G. Co. No. 114 Dillon hrs., 65 ft. N, 816 ft. E, SW SE NE sec. 14-21-15. 7-in. cmt. 1,484 ft.; T.D. 1,484 ft.; W.O.C.S.

Catahoula Parish

Balcones Corp. No. 1 T. J. Chisholm, 1,500 ft. N, 2,500 ft. W, SE cor. sec. 19-10-8e. Drlg.

Claiborne Parish

Max Hirsch et al No. 1 C. O. Ferguson, 2,640 ft. N, 1,000 ft. E, SW cor. sec. 29-22-6w. Drlg.

S. E. Langford et al No. 1 White, NE SW sec. 26-21-8. T.D. 512 ft.; abd.

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. T.D. 5,379 ft.; prep. run csg.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. T.D. 5,203 ft.; P.B. from 8,616 ft.; comp. 20,000,000 ft. gas, 2,200 lbs.

United Gas No. 1 A. P. Taylor, SE cor. sec. 5-19-5. T.D. 4,900 ft.; P.B. from 5,926 ft.; arg. test.

De Soto Parish

Chamberlin et al No. 1 Lanier, 280 ft. N and E, SW NE sec. 29-11-11. Drlg.

Fite et al No. 1 Ramsey, sec. 36-11-11. S.D.; W.O.; T.D. 1,786 ft.; hole clean.

Jal Drlg. Co. No. 1 Jenkins, SE SW SE sec. 35-13-12. T.D. 2,460 ft.; pump. 15 B.P.D.; comp.

R. Kamon No. 1 Roscoe, SE NW sec. 14-12-13. T.D. 1,840 ft.; D.&A.

R. C. Payne No. 1 Harris, sec. 11-13-14. T.D. 3,000 ft.; contract depth; S.D.

Peral Oil Co. No. 1 Joyner, SE NW SW sec. 28-11-12. S.D. 1,480 ft.; chalk.

Stillers et al No. 2 Jenkins, 330 ft. S and W, NE SE NW sec. 35-13-12. Drlg. 2,-335 ft.

R. M. Sundby No. 1 A. P. Garland, NW SW sec. 7-14-14. Drlg. 2,630 ft.

Vaughn Prod. Co. No. 1 Sample, 330 ft. N and E, SW NE SE sec. 24-11-14. Loc.

Franklin Parish

Snyder & Sherrouse No. 1 Kimbee, SE SW sec. 36-12n-8e. Cg. 2,725 ft.

Grant Parish

Arcadia Oil Co. No. 4-B Swope, 330 ft. N of No. 2-B, sec. 17-9-1e. Drlg. 1,385 ft.

Cane River Prod. Co. No. 1 Swope, SW NW sec. 17-9-1e. T.D. 1,609 ft.; W.O.S.R.

Grant Oil Corp. No. 1 Holmes, 300 ft. N, 150 ft. E, SW NE SW sec. 17-9-1e. T.D. 1,609 ft.; 6-in. cmt. 1,601 ft.; W.O.C.S.

Kirby et al No. 1 Maxwell, 150 ft. N, 300 ft. W, SE SW sec. 9-9-1e. T.D. 852 ft.

Pet. Prod. Co. No. 1 Buffington, SE NE sec. 18-9-1. T.D. 1,608 ft.; W.O.S.R.

Perry et al No. 1 Barrett, 150 ft. N and W, SE NE SE sec. 17-9-1e. T.D. 1,604 ft.; 6-in. cmt. 1,583 ft.; W.O.C.S.

T. W. Tannin No. 1 Kees, SE sec. 18-9-1e. Drlg. 100 ft.

Morehouse Parish

Carbons Consolidated No. 8 Feazel, NW SW sec. 3-20-4e. R.U.
So. Carbon Co. No. 17 Tensas, NE cor. sec. 4-20-4. 6-in. cmt. 2,165 ft.; W.O.C.S.
S. D. Hunter No. 11 Allison, 4,402 ft. E. 2,423 ft. S, NW cor. sec. 1, in sec. 47-20-4e. Loc.
S. D. Hunter No. 12 Allison, 3,388 ft. E. 1,144 ft. N, SW cor. sec. 36, in sec. 37-21-4e. Loc.
S. D. Hunter No. 13 Allison, 4,253 ft. E. 3,666 ft. N, SW cor. sec. 36, in sec. 37-21-4e. 5-in. cmt. 2,178 ft.; W.O.C.S.
United Carbon No. 3 Crossett, 641 ft. N and W, SE sec. 19-21-5e. 8-in. cmt. 735 ft.; W.O.C.S.

Ouachita Parish

Carbons Cons. No. 10 fee, 707 ft. N, 738 ft. E. SW cor. sec. 26-19-3e. 6-in. cmt. 2,130 ft.; W.O.C.S.
United Carbon No. 7 Neston, NE cor. sec. 32-19-4e. R.U.

Red River Parish

Byrd Exp. Co. No. 1 Edge, SW NE sec. 29-13-11. Hole clean; T.D. 2,499 ft.; W. O.S.R.
W. J. Hunter No. 1 Long Bell Lbr. Co., sec. 19-13-9. Drlg. 3,650 ft.
Perla Oil Co. No. 1 DeLong, 330 ft. S and E, C sec. 33-12-10. S.D. 1,215 ft. for fuel.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. T.D. 8,115 ft.; cmt. leaky csg.

Sabine Parish

Blue Lake Oil Co. No. 1 Delaney & Wheless, NW SW sec. 31-9-13. S.D. for csg.; 7-in. cmt. 1,623 ft.; W.O.C.S.
A. L. Braden et al No. 1 P. Henderson, 720 ft. N, 600 ft. E, SW sec. 29-9-13 Comp.; flw. 750 B.P.D.; T.D. 1,681 ft.
F. G. Cox No. 1 Whitney Corp., C NW NE sec. 8-9-13. D.S. stuck; S.D.; W.O.; T.D. 5,503 ft.
Earl F. Fox No. 1 Blankenship, NE SE NW sec. 13-9-12. Drk.
Hunter Co. et al No. 18 Sabine Ld. Co., SE sec. 28-8-13. Drlg. 50 ft.
J. R. Keen No. 1 Long Bell, 276 ft. N and 288 ft. W, SE cor. NE SW sec. 5-18-13. Acidized; W.O.S.R.
Posey Sisters Oil Co. No. 3 Burkett, NE cor. sec. 10-9-13. S.D. 3,234 ft.
L. Swift No. 1 Long Bell, NW SE SW sec. 11-8-14. 10-in. cmt. 62 ft.; W.O.C.S.

Union Parish

Interstate Nat. Gas No. 57 fee, 660 ft. N, 4,635 ft. W, SE sec. 30-21-4e. Drlg. 1,940 ft.
Interstate Nat. Gas No. 58 fee, 4,620 ft. N, 700 ft. W, SE sec. 1-20-3e. 8-in. cmt. 770 ft.
Interstate Nat. Gas No. 16 Grayling, 660 ft. N, 1,375 ft. W, SE cor. sec. 20-21-4e. Loc.
So. Carbon Co. No. 14 Grayling, SE cor. sec. 5-21-4e. 6-in. cmt. 2,185 ft.; W.O. C.S.

Webster Parish

Magnolia Pet. Co. No. 5 J. Cox, SW SE sec. 23-21-10. Drlg. 6,935 ft.
R. W. Norton No. 2 Josey & Masey, C W½ NE NW sec. 27-21-10. Clearing loc.
Ohio Oil Co. No. 1 R. M. Coyle, NE SE sec. 22-21-10. Drlg. 7,328 ft.
Ohio Oil Co. No. 1 Bodcaw Lbr. Co., C NE SE sec. 28-21-10. Drlg. 7,491 ft.
Seaboard Oil Corp. No. 1 Cotton Valley Ld. & Lbr. Co., NW SW sec. 35-22-10. Drlg. 5,440 ft.
Standard Oil Co. of La. No. 1 E. Firdecker, 1,320 ft. E. 1,316 ft. S. NW cor. sec. 2-17n-9w. 9-in. cmt. 2,950 ft.; drlg. 2,954 ft.
Tide Water No. 1 L. Pipes, NE SE sec. 10-18-10. Drlg. 3,180 ft.
United Gas No. 2 Davis, 660 ft. S and E, NW cor. sec. 23-21-10. Drlg. 6,910 ft.
United Gas No. 1 Mixon, SE SW sec. 22-21-10. Drlg. 6,934 ft.
Woodley Pet. Co. No. 2-B L. C. Cox, cen. SW SW sec. 23-21-10. Drlg. 5,141 ft.

Winn Parish

C. A. Cline No. 1 Collingsworth, SW SE SE sec. 14-10-6w. Drk.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 13 State, sec. 17-22s-18e. R.U.

Bayou Mallett—Acadia Parish

Superior Oil Prod. Co. No. 1 Savoie, sec. 47-7s-1e. Drk.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 35 Watkins, sec. 8-12s-12w. T.D. 5,462 ft.; drlg. plug.

Caillou Island—Terrebonne Parish

Texas Co. No. 33 State, sec. 20-23s-20e. Drlg. sdy. L. rock 4,882 ft.
Texas Co. No. 31 State, sec. 20-23s-20e. Drlg. sh. 4,299 ft.

Charenton—St. Mary Parish

Mike Hogg et al No. 1 Laws Realty Co., sec. 30-13s-10e. R.U.

Choctaw—Iberville Parish

Standard Oil Co. No. 6 Gay, sec. 52-9s-11e. Drlg. sh. 2,320 ft.

Cameron Meadows—Cameron Parish

Burton Sutton Oil Co. No. 15 Sch. Ld., sec. 16-14s-13w. T.D. 3,345 ft.; 7-in. csg. 3,323 ft. Flowed 100 bbls. of fluid per day, 40 per cent B.S.&W. R.U. to pump.
Burton Sutton Oil Co. No. 16 Sch. Ld., sec. 16-14s-13w. Set 10¾-in. csg.; T.D. 3,549 ft.; 7-in. csg. 3,529 ft.; swabbing.
Burton Sutton Oil Co. No. 17 School Ld., sec. 16-14s-13w. R.U.
Magnolia Pet. Co. No. 19 Cameron Meadows, sec. 21-14s-13w. Drk.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drk.
Humble O. & R. Co. No. 13 Humble Community, sec. 33-10s-2e. T.D. 4,423 ft.; P.B. and sdtrkg.; top salt 5,178 ft.; T.D. 5,254 ft.; P.B. 2,114 ft.; top salt 5,672 ft.; T.D. 5,682 ft.; P.B. 4,465 ft.; 7-in. csg. 4,458 ft.; perf. csg. 4,349-55-57 ft.; failed to flow; pulling D.S. Abd.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. T.D. 6,444 ft.; 7-in. cmtd. on bottom.

Garden Island—Plaquemines Parish

Texas Co. No. 20 State, sec. 37-23s-33e. Drlg. sh. 4,747 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 3 Ada Mays, sec. 14-9s-8w. Drlg. sh. and L. 6,848 ft.
Fohs Oil Co. No. 16 Castle, sec. 13-9s-8w. Drlg. sh. 5,995 ft.
Union Sulphur Co. No. 10 Barbe, sec. 1-9s-8w. T.D. 6,745 ft.; 6⅝-in. csg. 6,740 ft.; deepend to 6,790 ft. Perf. csg. 6,702-11 ft.; I.P. 510 B.P.D. through 20/64-in. ck.
Union Sulphur Co. No. 11 Barbe, sec. 1-9s-8w. Drlg. sh. and L. 4,938 ft.
Union Sulphur Co. No. 12 Barbe, sec. 1-9s-8w. Drlg. sh. and L. 3,134 ft.
Union Sulphur Co. No. 2 Bel, sec. 12-9s-8w. T.D. 6,788 ft.; P.B. 5,271 ft.; sidetracked. Drlg. sh. 6,455 ft.
Union Sulphur Co. No. 3 Kaufman, sec. 13-9s-8w. P.B. T.D. 7,076 ft. I.P. 190 B.P.D. through ¼-in. ck.
Union Sulphur Co. No. 10 Powell, sec. 29-7s-2w. T.D. 6,758 ft.; testing.
Union Sulphur Co. No. 11 Powell, sec. 12-9s-8w. Loc.
Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.
Union Sulphur Co. No. 15 State, sec. 12-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 22 Erwin, sec. 12-12s-10w. Drlg. sd. 4,789 ft.
Harrison and Abercrombie No. 1 Verdine, sec. 36-12s-10w. 16-in. csg. 62 ft. T.D. 4,300 ft. Abd.
Independent Oil Co. No. 1 Sanner, sec. 29-12s-10w. S.D. 865 ft.
Stanolind O. & G. Co. No. 3 Duhon, sec. 22-12s-10w. Drlg. sd. 4,262 ft.
Stanolind O. & G. Co. No. 24-B Gulf Ld., sec. 14-13s-10w. Drlg. sd. and sh. 4,498 ft.
Stanolind O. & G. Co. No. 7-A School Ld., sec. 16-12s-10w. 10¾-in. csg. 1,969 ft.; T.D. 5,740 ft.; P.B. and S.T. 3,185 ft.; drlg. sh. 5,485 ft.
Superior Oil Prod. Co. No. 1 Hebert, sec. 32-12s-10w. P.B. and sdtrkd. 775 ft.; drlg. sh. 5,795 ft.
Texas Co. No. 20 State, sec. 12-12s-10w. Bldg. board walk.
Union Sulphur Co. No. 42 Walkins, sec. 13-12s-10w. Loc.

Iowa—Cameron Parish

Shell Pet. Corp. No. 21 Heyd, sec. 13-9s-7w. T.D. 6,573 ft. Reaming to set csg.

Jeanerette—St. Mary Parish

Stacey Doran et al No. 1 Eaves, sec. 70-13s-9e. Drk.
Herton Oil Co. No. 3 Carter, sec. 38-13s-9e. 10¾-in. csg. 1,461 ft.; drlg. sdy. sh. 6,162 ft.
Herton Oil Co. No. 4 Roane, sec. 40-13s-9e. T.D. 5,925 ft.; P.B. sidetracked; drld. to 5,745 ft.; D.S. stuck; washing over. P.B. to 4,850 ft. W.O.C.

Jennings—Acadia Parish

Cosmo Pet. Co. No. 4 Jennings Clemont, sec. 46-9s-2w. R.U.
Shell Pet. Corp. No. 2 Community, sec. 40-9s-2w. T.D. 5,466 ft.; drill stem stuck.
Stanolind O. & G. Co. No. 6 Houssiere-Latrelle, sec. 47-9s-2w. T.D. 7,534 ft.; I.P. 268 B.P.D. on gas lift.
Superior Oil Prod. Co. No. 1 Crawley, sec. 42-9s-2w. T.D. 6,444 ft.; running csg.
Superior Oil Prod. Co. No. 1 Jennings-Heywood, sec. 41-9s-2w. Drlg. sh. 6,160 ft.

Lafitte—Jefferson Parish

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. T.D. 10,942 ft.; stuck pipe while rm. at 10,932 ft. Sidetracked at 7,032 ft. Drlg. sh. and L. 7,906 ft.
Texas Co. No. 6 Lafitte, sec. 20-17s-24e. Dig canal.
Texas Co. No. 1 R. C. Milling, sec. 20-17s-24e. Drlg. sh. 9,400 ft.
Texas Co. No. 6 Rigolettes, sec. 39-17s-24e. Dig canal.

Lake Barre—Terrebonne Parish

Texas Co. No. 37 Lake Barre State, Drlg. sd. 7,970 ft.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6 LaFourche, sec. 11-8s-25e. T.D. 3,039 ft.; sdtrkd.; drlg. sd. and L. 3,009 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sh. 6,750 ft.

Leesville—Lafourche Parish

Carter-Michael No. 1 E. S. Bernard, sec. 26-21s-22e. Drk.
Gulf Oil Corp. No. 4 City of New Orleans, sec. 26-21s-22e. Drlg. sd. 4,337 ft.
Texas Co. No. 50 Leesville, sec. 34-21s-22e. Drilling W.S. 6,275 ft.
Texas Co. No. 51 Leesville, sec. 34-21s-22e. Drlg. sd. 5,694 ft.

New Iberia—Iberia Parish

Crysanthon et al No. 1 Gulf fee, sec. 71-12s-7e. T.D. 6,720 ft. R.U. to pump.
H. Fostiades No. 3 Gulf Ld., sec. 25-12s-7e. Drlg. sh. and L. 3,709 ft.
Wm. Hellis No. 4 Boliver, sec. 56-12s-7e. R.U.
Wm. Hellis No. 3 Bullock, sec. 52-12s-7e. Drlg. sdy. sh. 4,228 ft.
Wm. Hellis No. 3 Sabatier, sec. 54-12s-7e. T.D. 2,850 ft.; W.O.C.
Wm. Hellis No. 2 Schwing, sec. 56-12s-7e. Drlg. sdy. sh. 6,700 ft.
Kitos et al No. 3 Sealy, sec. 36-12s-7e. 9⅝-in. csg. 874 ft. Drlg. sh. 2,100 ft.
Texas Co. No. 1 Clementine, sec. 25-12s-1e. T.D. 7,354 ft.; salt; P.B.; sdtrkd. 4,090 ft. Drlg. sdy. sh. 5,198 ft.
Texas Co. No. 2-B Hanzen, sec. 54-12s-7e. T.D. 4,742 ft.; 7-in. csg. 4,705 ft. I.P. 639 B.P.D. through ¼-in. ck.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 3 Thomas, sec. 11-9s-4w. Drlg. sh. 2,955 ft.
Shell Pet. Corp. No. 6 Kratzer, sec. 12-9s-4w. 10¾-in. csg. 2,454 ft. Drlg. L 8,183 ft.

Sorrento—Ascension Parish

Sorrento Oil Co. No. 1 Bernard, sec. 9-19s-14e. Drlg. sh. 2,137 ft.
Pan American Prod. Co. No. 7 United Ld., sec. 15-10s-4e. R.U.

St. Martinsville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 57-11s-6e. 13⅜-in. csg. 1,387 ft. Abd. 8,134 ft.

Starks—Calcasieu Parish

J. R. Turnbull No. 1 Industrial Lbr. Co., sec. 20-9s-12w. Drlg. sh. 3,284 ft.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 834 fee, sec. 20-9s-10w. T.D. 4,469 ft.; P.B. 2,327 ft.; drlg. rock 4,158 ft.
Union Sulphur Co. No. 836 fee, sec. 20-9s-10w. T.D. 4,582 ft.; 7-in. csg. 4,561 ft. I.P. 756 B.P.D. through 18/64-in. ck.
Union Sulphur Co. No. 838 fee, sec. 20-9s-8w. T.D. 4,536 ft.; 7-in. csg. 4,480 ft.
Union Sulphur Co. No. 841 fee, sec. 29-9s-8w. Drlg. sh. 2,124 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 8-A Homeseekers Dev. Co., sec. 29-7s-2w. Drlg. sh. 5,070 ft.
Continental Oil Co. No. 9-A Homeseekers Dev. Co., sec. 29-7s-2w. Drk.
Continental Oil Co. No. 1-G Homeseekers Dev. Co., sec. 22-7s-2w. Drlg. sh. 6,493 ft
Continental Oil Co. No. 1 L. J. Ortego, sec. 29-7s-2w. T.D. 8,317 ft.; 5⅜-in. csg. on bottom.
Continental Oil Co. No. 2-B Young, sec. 29-7s-2w. T.D. 8,318 ft.; 5⅜-in. csg. on bottom.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 9 Harmong, sec. 34-10s-12w. T.D. 2,979 ft.; 4½-in. csg. 2,900 ft.; W.O.C.

White Castle—Calcasieu Parish

Shell Pet. Corp. No. 4 Shingle, sec. 12-11s-12e. Drlg. L. 7,704 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. S.D. 5,047 ft.
Humble O. & R. Co. No. 1 Nordyke, sec. 23. Drlg. sh. 2,145 ft.

Allen Parish

Humble O. & R. Co. No. 3 Bel, located in cratered hole, sec. 26-6s-7w. 10¾-in. csg. 165 ft.; T.D. 2,870 ft.; 7-in. csg. 2,766 ft.; shot well; failed to stop flwg. S.W.

Avoyelles Parish

Coastal Mineral Dev., Inc., No. 1 Purdy-Hess, sec. 25-2n-3e. Drk.
George Conover No. 1 Purdy-Hess, sec. 36-2n-3e. Drk.
Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Union Sulphur Co. No. 1 M. P. Erwin, sec. 10-10s-8w. 10¾-in. csg. 1,296 ft. Drlg. sdy. sh. 5,685 ft.
Wilfred Lahaye No. 1 Bass, sec. 9-10s-12w. S.D. 80 ft.

Cameron Parish

Magnolia Pet. Co. No. 1 Johnson Bayou, sec. 16-15s-14w. T.D. 9,180 ft. Abd.
Magnolia Pet. Co. No. 1 Raymond Lebau, sec. 13-12s-9w. 13⅜-in. csg. 3,262 ft.; T.D. 8,313 ft. Abd.
Pure Oil Co. No. 1 Mallard Bay, sec. 23-13s-3w. 18⅝-in. csg. 1,499 ft. Drlg. sd. 6,915 ft.
Southern Sulphur Co. No. 2 State, sec. 29-15s-10w. Drlg. sh. 510 ft.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40-8s-2e. S.D. 6,623 ft.
Cavalier Oil Co. No. 1 Young, sec. 62-4s-2w. Drk.
La. Crusader Oil Co. No. 1 State University, sec. 65-7s-1w. Drlg. sh. 5,483 ft.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding, sec. 37-1s-1w. Spudded 15 ft. and S.D.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 1 Wilbert, sec. 67-9s-11e. Drlg. sh. 4,064 ft.

Iberia Parish

Jefferson Lake Oil Co. No. 409 Lake Pigneur, Twp. 12s-3e. Abd. 6,967 ft.
Jefferson Lake Oil Co. No. 411 Lake Pigneur, Twp. 12s-3e. Abd. 4,698 ft.
Jefferson Lake Oil Co. No. 413 State Lake Pigneur, Twp. 12s-5e.. Drlg. 1,070 ft.
Texas Co. No. 1-B State, Vermilion Bay sec. 16-15s-6e. Drlg. sh. 9,340 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 135 12s-11e. Drlg. sh. 2,015 ft.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Joe Sturdivant, sec. 25-10s-4w. 10¾-in. csg. 2,616 ft., T.D. 9,747 ft. Recov. stuck drill stem.

Lafourche Parish

Wm. Helis No. 1 City of New Orleans, sec. 19-23s-23e. Drlg. sh. 5,312 ft.
Pan American Prod. Co. No. 1 Harang, sec. 7-17s-20e. Drlg. sh. 5,204 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co, sec. 7-7s-3e. Drk.

Plaquemines Parish

Gulf Oil Corp. No. 1 Bay-Adams, sec. 25-32s-19. Drlg. sh. 2,314 ft. (cor.)
Tide Water Oil Co. No. 2 Manhattan Fruit Co., sec. 34-21s-22e. Top salt 4,733 ft. T.D. 4,747 ft. S.D.

St. Bernard Parish

Gulf Oil Corp. No. 1 Lake Lery, sec. 28-14s-14e. Drlg. sh. 3,000 ft.
Southern Sulphur Co. No. 2 State Lake Borgne, sec. 38-14s-15e. Drlg. sd. and sh. 1,104 ft.

St. James Parish

Shell Pet. Corp. No. 2 Colonial Sugar, 4,800 ft. N of No. 1, sec. 15-12s-5e. Coring sh. 8,088 ft.

St. Landry Parish

Stanley Thompson No. 1 Lewis, sec. 29-5s-6e. Drlg. sh. and L. 5,220 ft.
Superior Oil Prod. Co. No. 1 Savoie, sec. 26-8s-3e. Coring sdy. sh. 8,856 ft.

St. Martin Parish

Shell Pet. Corp. No. 1 Hefla Ld. Co., sec. 38-8s-5e. S.D. 6,762 ft.
Texas Co. No. 9 St. Martin, sec. 21-8s-7e. R.U.

St. Mary Parish

Texas Co. No. 1 Horse Shoe Bayou, sec. 40-17s-9e. Drlg sh. and L. 8,878 ft.

Terrebonne Parish

Humble O. & R. Co. No. 1 H. J. Ellender, sec. 23-19s-19e. Drlg. sd. 8,608 ft.
Shell Pet. Corp. No. 1-B Realty, sec. 18-17s-15e. Drlg. sd. and gravel 180 ft.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. T.D. 11,732 ft.; circulating with mud; well tried to blow out; fsg. for stuck D.S.; hole cleaned to 10,680 ft.; set cmt.; P.B. to 10,800 ft.; sdtrkd. at 10,800 ft.; drlg. sh. 11,702 ft.
Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.
Stanolind O. & G. Co. No. 1 Fred Stovall, 13⅜-in. csg. 1,980 ft.; drlg. sh. 8,710 ft.

ARKANSAS

Bradley County

Joe Modisette No. 1 Bird, N half NW NE sec. 28-16-12. T.D. 5,195 ft.; S.W.; D.&A.

Cleveland County

J. R. Lockhart No. 1 Ida Robertson, SE cor. sec. 36-10-11w. Drlg. 2,970 ft.

Columbia County

King Oil Co. No. 1 Kitchen et al, NE SE NW sec. 13-17-22. Drlg. 3,810 ft.

Dallas County

Walter Lown No. 1 G. Atkinson, NE NW SE sec. 7-10-13. Show oil 2,414-18 ft.; curing tiltes.

Grant County

Wallace & Staples No. 1 W. F. Davis, SE SE NW sec. 23-6-15. Fsg. 1,861 ft.

Hempstead County

Root Pet. Co. No. 1 D. F. Jones, 330 ft. S and W, NE SW NE sec. 16-13-23. 10-in. cmt. 123 ft.; W.O.C.S.

Miller County

Harber & Parks No. 1 Dean, NW SE sec. 24-15-26. 10-in. cmt. 460 ft.; W.O.C.S.
Odell Hinson No. 1 Montana Realty Co., 330 ft. S and W NE NW NW sec. 3-17-28. T.D. 5,278 ft.; S.O. 5,276-78 ft.; rng. csg.; rec.; D.P.; 7-in. cmt. 5,270 ft.; T.D. 5,278 ft.; W.O.C.S.
C. V. Lenz No. 7 Dale, O.W.D.D., sec. 24-15-26. T.D. 4,215 ft.; cg. oil sand; prep. set csg.; rng. 7-in. csg.; T.D. 4,215 ft.

Nevada County

Benedum & Trees No. 1 Block, NE NE SE sec. 9-14-20. R.U.

Benedum & Trees No. 1 Fincher, NW SW NE sec. 10-14-20. Cg. 1,208 ft.

Benedum & Trees No. 2 Grove, NE SW NW sec. 10-14-20. Comp.; 4,900,000 ft. gas; T.D. 1,236 ft.

Benedum & Trees No. 3 Grove, SW SE NW sec. 10-14-20. 9-in. cmt. 1,224 ft.; T.D. 1,273 ft.; W.O.S.R.

Benedum & Trees No. 4 Grove, SE SW NW sec. 10-14-20. Loc.

Benedum & Trees No. 5 Grove, NE SW NW sec. 10-14-20. Loc.

Benedum & Trees No. 6 Grove, SW NE NW sec. 10-14-20. Loc.

L. M. Glasco No. 1 Ritchie Est., NW NW SE sec. 10-14-20. Drlg. 880 ft.

John R. Lewis No. 1 W. Haynie, SW SW NE sec. 5-14-20. R.U.

Steel & Warmack No. 1 Wm. Haynil, SE SE NW sec. 6-14-21. S.D. 200 ft.

Ouachita County

J. D. Reynolds No. 2 P. C. Grayson, Lot 4, Blk. 10, Stephens Sur., sec. 21-15-19. R.U.

J. D. Reynolds No. 2 M. V. Lenehon, NW SE SW sec. 36-15-16. T.D. 2,014 ft.; W.O.S.R.

Pope County

Arkansas-La. No. 1 Smith, sec. 10-8n-21w. Drlg. 3,120 ft.

Pulaski County

G. L. Kilselman No. 1 fee, SE SE SW sec. 2-1-13. S.D. 600 ft.

Union County

Fenn-Ark. Corp No. 1 W. N. Raulston. 330 ft. S and E, NW NW SE sec. 12-17-14. T.D. 2,810 ft.; S.D. rig repairs.

S.H.A. Oil Corp. No. 2 E. F. Gregory, SW NE SW sec. 10-17-14. Comp.; flw. 20 B.P.H.; T.D. 3,438 ft.

S. H. A. Oil Corp. No. 1 H. D. Warren, NE SW SW sec. 10-17-14. O.W.D.D.; arrg. to deepen.

TEXAS

Week Ending December 5

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 9 Austin College, Wm. Harvey Sur. T.D. 3,282 ft.; I.P. 210 B.P.D. through ¼-in. ck.

Humble O. & R. Co. No. 10 Diemar, Wm. Hardy Sur. T.D. 1,126. W.O.C.

Humble O. & R. Co. No. 4 Duncan, J. E. Groce Sur. R.U.

Humble O. & R. Co. No. 9-B Hardy, J. E. Groce Sur. T.D. 4,085 ft.; I.P. 16 B.P.H through ¼-in. ck.

Hastings—Brazoria County

W. L. Goldson No. 2 fee, B.B.B.&C. Sur. T.D. 6,135 ft.; P.D. 4,620 ft.; strkd. Drlg. sh. 5,200 ft.

Humble O. & R. Co. No. 5 Brown, W. H. Snyder Sur. 10¾-in. csg. 1,649 ft. T.D. 6,088 ft. W.O.C.

Humble O. & R. Co. No. 7 Brown, W. H. Snyder Sur. 10¾-in. csg. 1,619 ft.; drlg. sh. 6,181 ft.

Humble O. & R. Co. No. 1 King, H.T.&B. Sur. Drk.

Showers and Monterief No. 1 L. Hughey, C of 10-ac. tr., H.T.&B. Sur. No. 20. Drlg. sh. 6,070 ft. T. D. Running csg.

Stanolind O. & G. Co. No. 1 Blount, B. T. Masterson Sur. 10¾-in. csg. 1,675 ft. T.D. 1,680 ft.

Stanolind O. & G. Co. No. 6 Drake, H.T.& B. Sur. No. 36. 10¾-in. csg. 1,842 ft.; coring sd. 6,042 ft.

Stanolind O. & G. Co. No. 5 Ford, A.C.H.& B. Sur. No. 1. 16-in. csg. 90 ft.; T.D. 6,080 ft.; I.P. 525 B.P.D. through ¼-in ck.

Stanolind O. & G. Co. No. 8 Ford, A.C.H.& B. Sur. No. 1. Drk.

Stanolind O. & G. Co. No. 1 Lang, H.T.& B. Sur. No. 29. Drlg. sh. 3,577 ft.

Stanolind O. & G. Co. No. 2 Scott, H.T.& B. Sur. No. 29. Drlg. sh. 3,566 ft.

Stanolind O. & G. Co. No. 1 Sheffield, H. T.&B. Sur. No. 29. Drk.

Stanolind O. & G. Co. No. 2 Surface, B.B. B.&C. Sur. 10¾-in. csg. 1,874 ft. Drlg. sh. 5,736 ft.

Lockridge—Brazoria County

Gulf Oil Corp. No. 1 K. M. Gibson, J. W. Hall Sur. Drlg. sh. and L. 4,143 ft.

Gulf Oil Corp. No. 1 Fred Reiss, J. W. Hall Sur. Drlg. sd. 4,714 ft.

Shell Pet. Corp. No. 1 Prison Farm, J. W. Hall Sur. Bldg. roads.

Manvel—Brazoria County

Bowles & Borsodi No. 4 Norvell Co., Inc., H.T.&B. Sur. No. 23. R.U. and S.D.

Harrison & Abercrombie No. 3 Lewellen, Lot 15, A.C.H.&B. Sur. Drlg. sh. 4,400 ft.

Philtop O. & G. Co. No. 1 R. W. Frost, C Lot 117, E. Little Sur. T.D. 4,129 ft.; S.D.

E. A. Stone No. 1 Nichols, E. Little Sur. Drk.

Texas Co. No. 1 A. Ellis, H. H. Little Sur. Old T.D. 5,738 ft.; sdtrkd. 3,539 ft.; drlg. sd. 5,262 ft.

Texas Co. No. 5 Leider, H. N. Little Sur. Drk.

Old Ocean—Brazoria County

Harrison and Abercrombie No. 3 Bernard River, Charles Breen Sur. Drlg. sh. 5,541 ft.

Heyser—Calhoun County

Humble O. & R. Co. No. 4 E. H. Welder, J. M. Rios Sur. T.D. 5,470 ft. I.P. 8 B.P.H. through ¼-in. ck.

Humble O. & R. Co. No. 5 P. H. Welder, A Sisneros Sur. T.P. 4,876 ft. Making D.S.T.; T.D. 5,475 ft. I.P. 15 B.P.H. through 3/16-in. ck.

Humble O. & R. Co. No. 6-B P. H. Welder, A. Sisneros Sur. Drlg. 3,990 ft.

Humble O. & R. Co. No. 6-A P. H. Welder, J. M. Rios Sur. Drlg. sh. 4,386 ft.

Portilla Oil Co. No. 1-C P. H. Welder, A. Sisneros Sur. T.D. 5,470 ft.; 7-in. csg. 5,470 ft. I.P. 15 B.P.H. through 3/16-in. ck.

Portilla Oil Co. No. 2-C P. H. Welder, A. Sisneros Sur. T.D. 1,027 ft. W.O.C.

Portilla Oil Co. No. 3 Welder, Sisneros Sur. Drlg. sh. 4,800 ft.

Portilla Oil Co. No. 6-C P. H. Welder, A. Sisneros Sur. Drk.

Anahuac—Chambers County

Humble O. & R. Co. No. 3 Boyt, sec. 44, H.&T.C. Sur. T.D. 7,124 ft.; pulling screen.

Humble O. & R. Co. No. 10 Broussard-Hebert, sec. 59, H.&T.C. Sur. Drk.

Humble O. & R. Co. No. 11 Broussard-Hebert, sec. 59, H.&T.C. Sur. Loc.

Gulf Oil Corp. No. 1 Pommer, sec. 46, T.D. 7,127 ft.; 7-in. csg. 7,093 ft. I.P. 30 B.P.H through ¼-in. ck.

Gulf Oil Corp. No. 1 Wilcox, sec. 48, H.& T.C. Sur. R.U.

Humble O. & R. Co. No. 4 Marshall, sec. 50, H.&T.C. Sur. 10¾-in. csg. 1,530 ft. Drlg. sh. 6,922 ft.

Humble O. & R. Co. No. 4-B White, J. McGahey Sur. Drlg. sh. 5,900 ft.

Humble O. & R. Co. No. 6-B White, James McGahey Sur. T.D. 7,129 .tf; 5½-in. csg. 7,121 ft. I.P. 13 B.P.H. through ¼-in. ck.

Humble O. & R. Co. No. 18 White, J. McGahey Sur. T.D. 7,132 ft.; running csg.

Sun Oil Co. No. 2 Myra White, James McGahey Sur. R.U.

Cotton Lake—Chambers County

R. W. Fair No. 1 Ben Dutton, A. B. J. Winfree Sur. Coring sh. 6,190 ft.

Glenn H. McCarthy No. 5 Kilgore, J. Townsend Sur. T.D. 6,309 ft.; 5½-in. csg. 6,304 ft.; tstd. S.W. and oil; tstg. 6,292-98 ft. Placed cmt. retainer at 6,304 ft.

Glenn H. McCarthy No. 6 Kilgore, J. Townsend Sur. 9⅝-in. csg. 1,800 ft. Drlg. sh. 5,845 ft.

Glenn H. McCarthy No. 7 Kilgore, J. Townsend Sur. Drk.

Humble O. & R. Co. No. 2 Howard, Winfree Sur. Loc.

Salt Dome Oil Co. No. 1-A Lawrence, Solomon Barrow Sur. Drlg. sh. 4,165 ft.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 4 State, due S of Sun Oil Co. No. 1 Chambers in Turtle Bay. Drk.

Sun Oil Co. No. 3 Chambers, Chambers County Sch. Ld. Drlg. L. 1,588 ft.

Big Creek—Fort Bend County

Gulf Oil Corp. No. 72 Davis, M. Young Sur. R.U.

Jenal Oil Co. No. 3 Byron, M. Young Sur. T.D. 3,736 ft.; 7-in. csg. 2,850 ft.; P.B. 2,740 ft.; drld. to 2,552 ft.; P.B. 2,344 ft.; milled out csg. 2,425 ft.; fsg.

Thompson Drlg. Co. No. 1 W. C. Moore, B. Wickerson Sur. S.D. 3,690 ft.

Blue Ridge—Fort Bend County

Barnett Pet. Co. No. 1-B Blakely, Lot 7, Blk. E, Drew Sur. T.D. 3,876 ft. (cor.); swbg.

San Jacinto Oil Co. No. 1 Bassett Blakely, E. Drew Sur. R.U.

Texas Gulf Prod. Co. No. 14-B Blakely, J. Poitivent Sur. Drlg. wtr. sd. 6,040 ft.

Boling—Fort Bend County

Mack Hank Oil Co. No. 2-A Farmer, J. Scott Sur. T.D. 4,433 ft.; P.B. and sidetracked; drlg. sd. 4,835 ft.

H. K. Spear et al No. 1 Kasperek, Simon Miller Sur. 7-in. csg. 3,960 ft.; T.D. 4,-015 ft.; P.B. 3,882 ft.; swbd. S.W.; pulling tbg.; to reset screen.

Orchard—Fort Bend County

Gulf Oil Corp. No. 49 J. M. Moore, Germain Immg. No. 8. T.D. 972 ft.; fsg.

Gulf Oil Co. No. 50 Moore Germain Immg. R.U.

Thompson—Fort Bend County

J. N. Rayzor No. 1 Grimes, Kennedy Sur. Drlg. sh. 3,309 ft.

High Island—Galveston County

Stanolind O. & G. Co. No. 58 Cade, N. Fitzsimmons Sur. Drlg. sh. 5,891 ft.

Stanolind O. & G. Co. No. 60-A Cade, M. Duncan Sur. Drk.

Stanolind O. & G. Co. No. 59-A M. Fitzsimmons Sur. Drlg. sd. and sh. 5,730 ft.

Dickinson—Galveston County

Coast Pet. Co. No. 4 Stewart, W. K. Wilson Sur. T.D. 8,741 ft. I.P. 360 B.P.D. through ¼-in. ck.

Diadem Oil Co. No. 1 Way, P. G. Merritt Sur. Loc.

Humble O. & G. Co. No. 1 Boone, W. K. Wilson Sur. 16-in. csg. 213 ft. Drlg. sh. 8,888 ft.

Humble O. & R. Co. No. 12-A Stewart, W. K. Wilson Sur. Drlg. sh. 8,602 ft.

Humble O. & R. Co. No. 13-A Stewart, W. K. Wilson. Drk.

Kenben Oil Co. No. 3 Stewart, W. K. Wilson Sur. Drk.

Kenco Corp. No. 1 Stran, J. S. Sherman Sur. Drlg. sh. 7,867 ft.

Pan American Prod. Co. No. 2 Craig, W. K. Wilson Sur. T.D. 8,620 ft.; wet gas; will shut in.

Sinclair Prairie Oil Co. No. 1 W. Weems, W. K. Wilson Sur. Loc.

Smith and MacDannald No. 1 Shelar, J. O. Jones Sur. 16-in. csg. 120 ft.; 10¾-in. csg. 981 ft. Coring 8,181 ft.

Greens Lake—Galveston County

Sun Oil Co. No. 5 Hughes, W. M. C. Baker Sur. Drlg. sd. and sh. 3,658 ft.

Batson—Hardin County

Deering et al No. 5 Hooks, Donoho Sur. Drlg. sh. and L. 4,878 ft.

Deering et al No. 4 W. W. Cruse, F. H. Green Sur. T.D. 5,506 ft.; 7-in. csg. 5,-489 ft. Pumped 600 bbls. of fluid per day, 20 per cent oil.

Goose Creek—Harris County

Humble O. & R. Co. No. 53 Gaillard, Wm. Scott Labor. R.U. to pump; T.D. 1,258 ft.

Humble O. & R. Co. No. 54 Gaillard, Wm. Scott Labor. 7-in. csg. 1,312 ft. Abd. 1,329 ft.

Mykawa—Harris County

Flanagan Prod. Co. No. 2 Minnetex, W. J. Lovett Sur. R.U.

West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.

South Houston—Harris County

E. A. Showers No. 2 Tate, H.T.&B. Sur. No. 6. T.D. 4,020 ft.; 7-in. csg. 3,930 ft.

Stanolind O. & G. Co. No. 2 Butz, H.T.&B. Sur. No. 6. 9⅝-in. csg. 1,426 ft. W.O.C.

Stanolind O. & G. Co. No. 4 Holland and Price, H.T.&B. No. 6. Drlg. sh. 889 ft.

Stanolind O. & G. Co. No. Drlg. Dist. No. 47. 10¾-in. csg. 1,451 ft. T.D. 4,775 ft.; 7-in. csg. 4,734 ft.

Stanolind O. & G. Co. No. 1 District No. 11. 10¾-in. csg. 1,449 ft.; T.D. 4,545 ft.; P.B. 3,970 ft. W.O.C.

Tomball—Harris County

Duffie Smith-Koury No. 1 Hillegeist, J. Houst Sur. 10¾-in. csg. 610 ft.; S.D. 5,-649 ft.; perf. csg. 5,607-20 ft.; comp. for gas well.

Humble O. & R. Co. No. 5 H. S. Gebhard, W. Perkins Sur. Drk.

Humble O. & R. Co. No. 6 Holderrieth, J. Pruitt Sur. Drk.

Humble O. & R. Co. No. 3 C. H. Mueller, T. A. Duclose Sur. Drk.

Humble O. & R. Co. No. 8-A Quilter, A. Senschal Sur. 5½-in. csg. 5,548 ft.; T.D. 5,559 ft.; jetting with gas. I.P. 9 B.P.H.

Humble O. & R. Co. No. 15 J. D. Reid, C. Goodrich Sur. R.U.

Humble O. & R. Co. No. 1 Townsite Unit 18, W. Hurd Sur. T.D. 5,574 ft. W.O.C.

Humble O. & R. Co. No. 1 Wyatt, J. Pruitt Sur. Drlg. sh. 4,820 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 Phelan, C. Williams Sur. Top oil sd. 6,734 ft.; T.D. 6,781 ft.; 7-in. csg. 6,781 ft. Perf. csg. 6,775-78 ft.; I.P. 420 B.P.D. through ¼-in. ck.

Humble O. & R. Co. No. 2 Phelan, C. Williams Sur. Drk.

Glenn H. McCarthy No. 1-B Longe, H. Williams Sur. Drlg. sh. 4,310 ft.

Glenn H. McCarthy No. 2-B Longe, H. Williams Sur. T.D. 5,415 ft.; P.B. and strkd. at 3,623 ft. Drlg. sh. 4,840 ft.

Stanolind Oil & Gas Co. No. 1 Sarge, H. Williams Sur. T.D. 6,105 ft. Running csg.

Texas Co. No. 1 Yount, A. Houston Sur. 10-in. csg. 1,236 ft; T.D. 8,501 ft.; abd.

Big Hill—Jefferson County

Stanolind O. & G. Co. No. 1 Fitzhugh, McFaddin Sur. 10¾-in. csg. 1,861 ft. W.O.C.

Fannett—Jefferson County

Gulf Oil Corp. No. 11 Burrell, W. H. Smith Sur. Drlg. sd. and rck. 2,622 ft.

Nome—Jefferson County

Shell Pet. Corp. No. 2 Paggi, Peveto Sur. Drlg. sh. 1,215 ft.

Sun Oil Co. No. 3 Paggi, J. W. Kirby Sur. T.D. 6,052 ft.; 7-in. csg. 6,005 ft.

Texas Canadian Oil Co. No. 1 Ward and Ward, A. Horton Sur. Loc.

Cleveland—Liberty County

Gulf Oil Corp. No. 16-C Kirby. R.U.

Hankamer—Liberty County

Gulf Oil Corp. No. 1 Bernice Hankamer. T.D. 4,331 ft.; R.U. to pump.

Hull—Liberty County

Eclipse Oil Co. No. 1 Barrow. T.D. 5,014 ft.; cut and pull tbg. to 4,000 ft.

Gulf Oil Corp. No. 22 Baldwin, J. Devore Sur. R.U.

Gulf Oil Corp. No. 71 Phoenix. T.D. 4,101 ft.; 5-in. csg. 3,731 ft.; T.D. 3,587 ft.; R.U. to pump.

Gulf Oil Corp. No. 114 Phoenix, J. Devore Sur. R.U.

Esperson—Liberty County

General Crude Oil Co. No. 21, Moores Bluff, M. Duncan Sur. T.D. 4,109 ft. I.P. 100 B.P.D. through 11/32-in. ck.

General Crude Oil Co. No. 22 Moores Bluff, M. Duncan Sur. R.U.

General Crude Oil Co. No. 25 Moores Bluff, M. Duncan Sur. Drlg. sh. 3,000 ft.

Bay City—Matagorda County

Hamman Expl. Co. No. 1 J. H. Crocker, E. Hall Sur. 13⅜-in. csg. 1,260 ft.; 9⅝-in. csg. cmtd. at 6,500 ft.; drlg. sh. 8,315 ft.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Top salt 796 ft.; drlg. salt 1,826 ft.

Markham—Matagorda County

Hamill and Hamill No. 6 Hudson, Henry Parker Sur. Recovered S.W. 4,250-65 ft.; T.D. 4,444 ft.

Powers Prod. Co. No. 5 Myers, Wm. Hadden Sur. T.D. 4,590 ft.; 5-in. csg. 4,038 ft. No report.

Superior Oil Co. No. 1-B Hawks, W. H Gainer Sur. T.D. 6,055 ft.; tstd. S. W through perf. csg. 4,518-32 ft. No report.

Texas Gulf Prod. Co. No. 1 Hudson, Henry Parker Sur. Spudded.

Van Vleck—Matagorda County

Skelly Oil Co. No. 11-B Cobb, M. Cummins Sur. T.D. 8,248 ft. oil sand. Running coring test.

Skelly Oil Co. No. 12-B Cobb, M. Cummins Sur. T.D. 7,522 ft. Making squeeze job 7,501-08 ft.

Skelly Oil Co. No. 13-B Cobb, M. Cummins Sur. T.D. 7,493 ft.; 5⅜-in. csg. 7,493 ft.; testing.

Conroe—Montgomery County

Adeltex Oil Co. No. 1 Lewellen, R. G. Hunter Sur. Drk.

Feltex Oil Co. No. 3 Keystone Mills, L. Smith Sur. R.U.

Humble O. & R. Co. No. 1 Urech, R. Kuykendall Sur. 9⅝-in. csg. 491 ft.; T.D. 5,168 ft. W.O.C.

Strake Pet. Co. No. 7-B Bean, Lynch Sur. 10¾-in. csg. 887 ft.

Steinberger Pet. Co. No. 1 Koonce, D. W. Collins Sur. Drlg. 300 ft.

Sun Oil Co. No. 23 Keystone, L. Smith Sur. R.U.

Ace—Polk County

Peyton Bros. No. 1-B Kirby West Lmbr. Co., G. S. Thomas Sur. 10¾-in. csg. 550 ft.

Greta—Refugio County

Hewitt & Daugherty No. 34 Lambert, Swisher Sur. T.D. 5,912 ft.; 5½-in. csg. on bottom.

Hewitt & Daugherty No. 35 Lambert, Swisher Sur. Drlg. 5,587 ft.

United Gas Co. No. 31 Lambert, Hew Sur. T.D. 5,910 ft. I.P. 250 B.P.D. through 7/64-in. ck.

United Gas Co. No. 32 Lambert, Swisher Sur. Coring 5,845 ft.

United Gas Co. No. 12 J. J. O'Brien. Drlg. 1,730 ft.

Quintana-O'Connor—Refugio County

Quintana Oil Co. No. 8-C O'Connor, Main Sur. Coring 5,810 ft.

Quintana Oil Co. No. 41-A O'Connor, Swisher Sur. T.D. 5,833 ft.; 5½-in. csg. on bottom.

Quintana Oil Co. No. 42 O'Connor, Swisher Sur. R.U.

Quintana Oil Co. No. 2-A Reilly, Ximines Sur. Drlg. sh. 5,575 ft.

Keran—Victoria County

Gulf Oil Corp. No. 9 Keran, M. Delean Sur. Spudded.

Placedo—Victoria County

American Liberty Oil Co. No. 5 Cortez, J. M. Brownson Sur. No. 8. T.D. 4,760 ft.; 7-in. csg. 4,748 ft.

Barnsdall-American Liberty Oil Co. No. 5 J. M. Pickering, S.A.&M.G. Sur. Drlg. sh. 4,700 ft.

Barnsdall-American Liberty Oil Co. No. 10 Pickering and Roos, S.A.&M.G. Sur. T.D. 4,760 ft.; 7-in. csg. 4,750 ft.; I.P. 10 B.P.H. through 3/16-in. ck.

Commonwealth Oil Co. No. 4 Prencia, J. M. Brownson Sur. No. 8, Lot. 81. Drlg. sh. 2,500 ft.

Harrison and Abercrombie No. 5 Veas, J. B. Brownson Sur. T.D. 4,765 ft. I.P. 100 B.P.D through ¼-in. ck.

Magnolia Pet. Co. No. 3 Henderson and Pickering, Wm. Rupley Sur. T.D. 4,792

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ft.; P.B. 4,700 ft.; T.D. 4,775 ft.; 7-in. csg. 4,732 ft.

Magnolia Pet. Co. No. 1 Sklar, S.A.&M.G. Sur. R.U.

Ownby No. 4 Malek, S.A.&M.G. Sur. Drk.

Westgate Oil Co. No. 5 Mieska, S.A.&M.G. csg. 4,732 ft. R.U. to pump.

Clay Creek—Washington County

Pompkal et al No. 3 Klatle. S.D. 576 ft.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. 7-in. csg. 7,445 ft.; swbd. and flwd. 10 bbls. oil in 10 hrs.; drlg. 7,484 ft.

Sun Oil Co. No. 18 Janner, J. F. Perry Sur. T.D. 1,360 ft. Comp.; no gauge.

Louise—Wharton County

Pure Oil Co. No. 5 Stewart, Morris and Cummins Sur. No. 25. Drlg. sh. and L. 2,988 ft.

Pure Oil Co. No. 4 Weaver, J. M. Brownson Sur. No. 22. Drlg. clay 670 ft.

Pickett Ridge—Wharton County

Texas Co. No. 3 Nilson, I.&G.N. Sur. No. 307. T.D. 988 ft.; reaming.

Withers—Wharton County

Texas Co. No. 15-C Pierce, J. Caldwell Sur. T.D. 5,559 ft.; 7-in. csg. 5,551 ft.; I.P. 96 bbls. in 9 hrs. through 3/16-in ck.

Texas Co. No. 17-C Pierce, Wm. Pettus Sur. T.D. 5,558 ft.; 7-in. csg. 5,551 ft.

Texas Co. No. 18-C Pierce, Wm. Pettus Sur. Drlg. sh. and bldrs. 854 ft.

GULF COAST WILDCATS

Austin County

R. L. Hopkins No. 1 J. W. Recnecke, J. Stephenson Sur. R.U.

W. H. Mitchell et al No. 1 F. Fenner, J. Fitzgibbons Sur. S.D. 3,417 ft.

Brazoria County

Beatty, Bowles and Borsodi No. 1 Truska, Lot 4, Blk. 3, H.T.&B. Sur. 9⅝-in. csg. 6,430 ft. Drlg. sh. 6,610 ft.

Texas Co. No. 1 Robbins, J. W. Brougham Sur. 11¾-in. csg. 4,950 ft. T.D. 6,451 ft.; reaming.

Calhoun County

Matagorda Oil Co. No. 1 Brundet, Tr. 8, Matagorda Island. 13⅜-in. csg. at 1,826 ft.

Chambers County

Laverne Deeker No. 1 Johnson, M. O. Perkins Sur. No. 30. Drk.

Sun Oil Co. No. 2 Hamilton, J. T. White Sur. 13⅜-in. csg. 1,385 ft.; T.D. 8,869 ft.; 8⅝-in. csg. at 8,715 ft. Found split in csg. at 3,392-3,422 ft. Made squeeze job; W.O.C.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41. T.D. 6,189 ft; 5½-in. csg. 6,187 ft.; P.B. 6,055 ft.; swabbing.

Fort Bend County

Sam Harrison No. 1 Victor Horak, H.&T. C. Sur. No. 36. R.U.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart, Spillman Sur. 9⅝-in. csg. 7,707 ft.; T.D. 10,460 ft.; P.B. 5,170 ft. Prepare to test.

Grimes County

Fred Harris No. 1 J. C. Chaney, W. Donoho Sur. 10¾-in. csg. 100 ft. S.D. 1,534 ft.

Hardin County

Republic-Houston Oil Co. No. 2 Brooks, G.W. Brooks Sur. (relief well). Cmtd. 7-in. csg. 7,027 ft.; T.D. 7,071 ft. T.D. of strkd. hole 7,196 ft.; tested S.W.; P.D. 5,714 ft. Prepare to strkd.

Republic Prod. Co.-Houston Oil Co. No. 3 fee, G. W. Brooks Sur. T.D. 6,979 ft. oil sd.; running coring test.

Harris County

D. B. Cherry et al No. 1 Bert J. Dodge, Josiah Harrell Sur. S.D. 1,660 ft.

Farrel and Cox No. 1 Bender, N. W. Travis Sur. R.U.

George Lawrence et al No. 1 Zoppa, J. Farwell Sur. 10¾-in. csg. 605 ft. Drlg. sh. 4,100 ft.

Jefferson County

D. B. MacDaniel No. 1 J. N. Gilbert Est., J. Ricard Sur. Drlg. sh. 1,700 ft.

Sun Oil Co. No. 2 Broussard & Hebert, T.&N.O. Sur. T.D. 8,217 oil sd. Prepare to run csg.

Lavaca County

Cole Pet. Co. No. 1 Reed-Nollkamper, A. Smothers Sur. S.D. 2,395 ft.

Welshire Union Oil Co. No. 1-A Pohl, F. Bass Sur. S.D. 1,796 ft.

Liberty County

J. G. Mayo et al No. 1 Dunman, John Cherry Sur. Drlg. 1,737 ft.

Matagorda County

Continental Oil Co. No. 1 Hawkins, D. McCarthy Sur. R.U.

Continental Oil Co. No. 2 Robbins, J. C. Franz Sur. R.U.

Jack Frazier No. 1 R. A. Estill, Tone and Jameson Sur. O.W.D.D.; T.D. 6,868 ft.; P.B. 5,831 ft.; sdtrkg.; T.D. 6,231 ft.; reaming.

Strake Pet. Co. No. 1 G. T. Sargent, L. E. Parker Sur. 13⅜-in. csg. 1,607 ft. T.D. 6,880 ft.; drill stem stuck.

Tetts & Harris No. 1 Pierce, Lot 23, W. E. Wallace Sur. S.D. 7,723 ft.

Texas Gulf Prod. Co. No. 1 Wadsworth, D. McCarthy Sur. O.W.D.D.; T.D. 8,853 ft.

Montgomery County

Chapman No. 1 Foster, D. Pevy House Sur. 10¾-in. csg. 42 ft.; T.D. 1,303 ft.; W.O.C.

Polk County

J. F. Dorrance et al No. 1 Sarah Wings, sec. 15, I.&G.N. Sur. Spudded and S.D. Drlg. sh. 4,851 ft.

Refugio County

Tide Water Oil Co. No. 1 Landgarf, J. Collyer Sur. Drlg. sh. 8,010 ft.

Trinity County

Cortez Oil Co. No. 1 V. and R. Kennedy, J. M. Prado Sur. R.U.

Tyler County

Republic Prod.-Houston Oil Co. No. 1 Hurd, Norman Hurd Lge. 16-in. csg. 47 ft.; 10¾-in. csg. 1,649 ft. Drlg. sandy L. 6,301 ft.

Victoria County

Magnolia Pet. Co. No. 1 Willie Beck, T. &N.O. Sur. 13⅜-in. csg. 920 ft.; drlg. sandy sh. 4,300 ft.

Plymouth Oil Co. No. 1 J. J. Welder, S. A. Balding Sur. T.D. 6,648 ft.; P.B. and st.; drlg. 4,300 ft.

Walker County

Garland, Hartman & Page No. 1 Carey Ld. & Dev. Co., D. M. McDonald Sur. R.U.

A. U. Morrison No. 1 W. D. Nolte, Wm. Hodge Sur. Drk.

Roswell Oil Co. No. 1 J. Bosborn, J. Jordan Sur. S.D. 520 ft.; no report.

Washington County

Stapper Pet. Corp. No. 1 W. H. Hoxie, S. Clampit Sur. Drlg. sh. 1,786 ft.

Wharton County

Felmont Oil Corp. No. 1 G. Mitchell, D. Wade Sur. T.D. 8,065 ft. Pulled csg. in two at 2,800 ft.; washing over drill stem.

Shell Pet. Corp. No. 1 Gus Sedyler, F. Biggam Sur. 8⅝-in. csg. 1,555 ft. Abd. 5,715 ft.

S. W. TEXAS WILDCATS

Aransas County

Barnsdall Oil Co. No. 1 Kate J. Edwards, 80 ft. W line, 330 ft. S line, Lot. 87, Lamar Townsite, Wm. Lewis Sur. M.I.M.

Atascosa County

Frontier Oil Co. No. 1 Oppenheimer, John Sharp Sur. Spudding in.

Helvetia Oil Co. No. 2 S. Pratt, 333 ft. SE and SW lines tr., Garza Sur. 46. Top Serp. 3,085 ft. Fsg. 3,421 ft.

McNeill Pet. Corp. No. 1 Tom, 5 mi. N of Whitsett. Cg. 823 ft.

L. G. Priest No. 1 Sanders, Garmon Sur. Drlg. 1,127 ft.

Rogers & Rogers No. 1 McLain, Trevino Sur. 79. Cd. sdy. sh. S.O. 1,510-1,628 ft.; sat. oil sd. 1,638-75 ft.; set csg. 1,510 ft.; T.D. 2,008 ft. Comp. 50 B.P.D.

Bandera County

A. T. Crane No. 1 Watson, Sur. 71. Drlg. 1,883 ft.

Bastrop County

Lee P. Ross No. 1 Caldwell, 10 mi. S of Bastrop. Recmtg. 7-in. csg. 2,424 ft.

Bee County

Benson & Jones No. 1 Ray, Anna Burk Sur. Drlg. 3,523 ft.

LaSalle Oil Co. No. 1 Ray, 360 ft. E line, 330 ft. N line, 40-ac. tr., Anna Burks Sur. Sdtrkd. 1,192 ft.; drlg. in sdtrkd. hole 1,926 ft.

Luling O. & G. Co. No. 1 Borrown, 2,550 ft. NW line, 250 ft. NE line, 450-ac. tr., Baker Sur. Loc.

Brooks County

California Co. No. 2-B Garcia, 1,395 ft. N line, 330 ft. W line, Tr. 3, La Mestina Gr. T.D. 2,452 ft. Blew out from gas sd. 2,448 ft.; making sulfur wtr., mud and gas; shut in; closed-in C.P. 260 lbs.

Douglass & Burden, Inc., No. 1 Haller, 300 ft. S and W lines, Sur. 436. S.D. 810 ft.

Burleson County

M. R. Exploration Co. No. 3 Fountain, Wm. Raleigh Sur. M.I.M.

Red Bank Oil Co. No. 1 Grann, 2,875 ft. S line, 1,500 ft. E line. E. Santel Sur. T.D. L. 6,241 ft.; show slight stain and good odor oil. To set csg. for test.

Duval County

Argo Oil Co. & John Clopton No. 1 Smith Corkill, cen. E½, Sur. 61. R.U.

Magnolia Pet. Co. No. 1 Labbe ranch, 2,330 ft. W line, 2,586 ft. N line, lse., Sur. 221. Drlg. 1,236 ft.

Mills Bennett Prod. Co. No. 4 Yates, Sur. 467. D.&A. 3,516 ft.

Oliver Oil Co. No. 1 Luby, Sur. 146. Loc.

Albert Plummer No. 1 Danmier, 990 ft. S line, 330 ft. W line, NE¼ Sur. 58. T.D. 3,800 ft. D.&A.

Texas Co. No. 1-C D.C.R.C., sec. 194. Drlg. sd. 2,125 ft.

Thomas No. 2 Parr, NE¼ Sur. 2. Drlg. 3,953 ft.

Edwards County

I.T.I.O. No. 1 Love & Evans, sec. 66, Blk. 3, G.W.T.&P. Ry. Sur. (Workover). Prep. deepen from O.T.D. 3,002 ft. to 6,250 ft.

Plateau Oil Co. No. 1 R. L. Hatch, sec. 66, J. W. May Sur. Drlg. 4,131 ft.

Fayette County

Paul Teas No. 1 Clement Vinklarek, S. Millett Lge. Set csg. in Edwards 7,142 ft. Perf. 7,122-39 ft.; swbg. sulfur wtr.; no show oil or gas.

Goliad County

Rual Singer No. 1 C Wood, Geo. Villa Sur. Loc.

Sun Oil Co. No. 1 Fromme, 330 ft. N line tr., 330 ft. W line, A Martle Sur. Drlg. 5,154 ft.

H. H. Weinert, Inc., No. 4 Runge Loan Co., B.&B. Sur. 36. R.U. and S.D.

Gonzales County

M. S. Holliday No. 1 Edwards, W. W. Page Lge. Sd. 562-69 ft.; S.O.; M.I.M.

Marts & Beavens No. 1 Martindale, J. Robertson Sur. Drlg. 3,629 ft.

Guadalupe County

Paul Armstrong No. 1 Tiller, J. C. King Sur. S.D. 1,767 ft.

Detroit-Texas Dev. Co. No. 1 Carter, 625 ft. SW line, 170 ft. NW line, 3,000-ac. tr. T.D. 2,356 ft. Swbg. oil.

J. Harper No. 1 Loepp, Drna Sur. Spdded.

Francis P. Hynes No. 1 Linne, 415 ft. NW line, 250 ft. SW line, 224-ac. tr., Reese Sur. Drlg. 1,813 ft.

Long & Ross No. 1 Feltz, Dunn Sur. T.D. 633 ft.; S.O.

Hidalgo County

H. J. Porter No. 2 Sweeny Est., Lot. 1, Wayne Wood Subd. No. 2. Drlg. 5,381 ft.

Dale Smith No. 1 Fairbanks & Young, Blk. 44, Porc. 46, jurisdiction of Reynosa. Drlg. 1,892 ft.

Jim Hogg County

Theo. Hicks No. 1 Kohler, sec. 9, Noriscitas Gr. T.D. 4,250. D.&A.

S. Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Sh. 3, Animas Gr. R.U.

Jim Wells County

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines Sur. 151. Set 7-in. csg. 2,340 ft.; fsg. 5,308 ft.

G. Tzelmelia (Putnam & Stewart) No. 1 Canales, C Blk. 32, Mosser Subd. (reinstated). Drlg. 4,357 ft.

Karnes County

R. L. Barnett No. 2 fee, 568-ac. tr., Hunter Sur. D.&A. 2,910 ft.

De Graff & Reele No. 1 Cochran, 460 ft. E line, 160 ft. S line, McConnell Lge. Drlg. 223 ft.

LaSalle County

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726, S.D. 800 ft.

Lee County

Pederson et al No. 1 Turner, David Hudson Sur. T.D. 6,560 ft.; milling 3,600 ft. to sdtrk.

Live Oak County

J. H. Durbin No. 4 Marbach, S. Hays Sur. Sd. 917-22 ft.; set csg.; recementing.

Hagen & Stewart No. 1 S. A. Joint Stock Ld. Bank, 800-ac. tr., John Turner Sur. Drlg. 97 ft.

Lema Oil Co. No. 3 Withers, J. Spark Drlg. 445 ft.

Sun Oil Co. No. 1 James, Pat McGlover Sur. Cg. 4,780 ft.

McMullen County

I. D. Ormsby No. 11 Griffith, B. Sparks Sur. D.S.T. 935-40 ft.; showed 90 ft. of mud and oil; no wtr.

Medina County

Joice Oil Co. No. 1-A Medina Irr. Farm Lds., Lot 1, Blk. 34, San Antonio Trust Subd. Drlg. 321 ft.

A. Chmel No. 1 Odem, 160 ft. W line, 493 ft. N line tr., Castro Sur. 174. M.I.M.

W. H. Wycoff No. 1 Bendele, 1,275 ft. W line, 150 ft. N line, Joe Barnhart Sur. 593. Drlg. 321 ft.

Nueces County

Allen and Seaboard Oil Corp. No. 1 Chapman, 660 ft. N and E lines, sec. 80, Laurels Farm Trs., Rincon de Corpus Christi Sur. Drlg. 6,763 ft.

Renwar Oil Corp. No. 1 Willoughby, 3,500 ft. SE N cor. 860-ac. tr., 330 ft. Petrovilla tr., sec. 4-G, Garrett Subd. Cg. 4,012 ft.

Geo. E. Smith No. 1 Carter, C NW¼, SE¼, sec. 8, Laurels Farms Trs. Drlg. sh. 6,117 ft.

Steve Paul No. 1 Smith, 1,650 ft. E line, 330 ft. S line, sec. 38, Flour Bluff Encinal Trs. Loc.

Wellington Oil Co. No. 1 Stockton, 300 ft. S and W lines, NE¼, sec. 25. Sd. 4,720-26 ft.; tstd. 700 ft. oil and 500 ft. S.W.; Drlg. 5,447 ft.

Real County

Sun Oil Co. No. 1 Dietert, 1,980 ft. E line, 660 ft. S line, sec. 7, G.W.T.&B. Sur. Drlg. 1,420 ft.

San Patricio County

W. B. Craig No. 1 Nelson, 471 ft. NE line, 466 ft. SE line, S¼, sec. 7, 1st Addn. Loc.

Eleanor Oil Co. No. 1 Kline, Lot 5, Blk. "C," Coleman-Fulton Pasture Subd. T.D. 6,840 ft.; S.D.

Eleanor Oil Co. No. 1 W. W. Toland, sec. 15, Blk. A, Coleman-Fulton Pasture Subd. Loc.

Hooper-Rutherford, Inc., No. 1 J. D. Willis, 466 ft. S and W lines tr., Williamson Sur. Drlg. 6,923 ft.

Texon Drlg. Co. No. 1 Harvey, 330 ft. N and W lines, Blk. 13, Rincon Subd., Sargent Sur. Cg. 3,615 ft.

Windsor Oil Co. No. 1 Bissett, Tr. 3, Tivoli Subd., Crockett Sur. Loc.

Starr County

J. F. Anderson No. 1 Yzagierre, Tr. 1, Porc. 79, J. of Camargo. T.D. 2,910 ft.; resume drlg.

H. L. Bass No. 1 Haden, 3,740 ft. S line, 555 ft. W line, Sh. 47, Porc. 80. Set 5½-in. csg. 1,336 ft.; to test.

J. H. Brower No. 1 Saenz, Sur. 363. S.D. 150 ft.

F. Davenport No. 1 Kelsey-Bass, 534 ft. S line, N 585-ac. tr., 2,856 ft. E line, Porc. 87. Set 1,000 ft. of surf. csg.; no report.

Davenport-Slick-Urschel No. 1 Slick Est., Davenport ranch, sec. 485. Drlg. 4,953 ft.

R. A. Mitchell No. 2 Bass, Sur. 8, Porcs. 75-77. Drlg. sh. 4,827 ft.

Moss & Heard No. 1 Ricaley, 1,500 ft. N of Highway No. 4, Porc. 83. R.U.

South Coast Oil Co. No. 1 Isabel Lopez, Sh. 40-B, Porc. 80. Drlg. 3,523 ft.

Sun Oil Co. No. 1 Orr, 330 ft. N and W lines, Porc. 103. Set csg. 94 ft.; drlg. 1,677 ft.

Webb County

R. M. Alexander No. 1 fee, Porc. 25. Loc.

American Texas Oil Co. No. 1 McKendricks, Porc. 46. Set surf. csg. 200 ft. W.O.C.

French Oil Corp. No. 1 Garcia, Sur. 1,121. Drlg. 1,571 ft.

Ivan Howard No. 3 First Nat. Bank, Sur. 475. T.D. 2,001 ft. D.&A.

Lu-Tex Oil Co. No. 1-A Lone Star Constr. Co., Blk. 26, Porc. 12, 13 and 14. Drlg. 143 ft.

Mid-Continent Pet. Corp. and Oklahoma Co. of Texas No. 1 Laubscher, 330 ft. NE and NW lines, NW¼, sec. 1,394. T.D. 3,509 ft. D.&A.

Rowan & Hope No. 2 Neal, Blk. 2, Sur. 857. R.U.

Superior Oil Co. No. 1 Masterson, 330 ft. S and W lines, Sur. 35. Drlg. 772 ft.

Wilcox O. & G. Co. No. 1 Puig, Serna Blanca Pasture, Galan Gr., Sur. 2,182. Drlg. 635 ft.

Zapata County

Allison et al No. 1 Bustamante, Sh. 10, Comitas Gr. Drlg. 206 ft.

Gilcrease Oil Co. No. 1 Trevino, 330 ft. NW and NE lines, Blk. 5, sec. 3, Mode Subd. Drlg. 3,587 ft.

Jennings No. 1 Martinez, Sur. 434. T.D. 150 ft.; S.D.

Zavalla County

Wilcox O. & G. Co. No. 1 Gillman, sec. 11. Spudding in.

S. W. TEXAS PROVEN

McCampbell—Aransas-San Patricio Counties

Atlantic Ref. Co. No. 1-C McCampbell, Lot 9, Blk. 41. Drlg. 1,326 ft. No report.

J. Nelson No. 1 Riggs, 330 ft. NW line, 213 ft. SW line, 6.46-ac. tr., Trs. 12 and 13, Blk. 16. Loc

Hilbig—Bastrop County

Joe E. Mills No. 1 Askew, 600 ft. NW line, 1,525 ft. SW line, 278.5-ac. tr., Wolfenberger Sur. T.D. 2,907 ft.

Cosden—Bee County

Elwood & Young No. 3 Barnett, John Place Sur. Sd. 3,636-53 ft.; S.O.; P.B. 3,960 ft.; T.D. 4,050 ft.; S.D.; W.O.O.

Foley—Bee County

Miller & Donzis No. 1-B Holzmark, 1,802 ft. SW line, 1,245 ft. SE line, S. May Sur. Sd. 4,064-75 ft. Set csg. 4,064 ft. Comp. 10 B.P.H.

Plummer—Bee County

W. C. McBride, Inc., No. 1 Plummer, sec. 33, Chesman Sur. Set csg. 3,042 ft. Comp. 10 B.P.H.

Ray—Bee County

J. A. West No. 1-B Geo. Ray, W. B. Blanchard Sur. Drlg. 3,853 ft.

Voss—Bee County

Home Oil Co. No. 1 Massey, 1,650 ft. SW line, 330 ft. SE line, 127-ac. tr., Pilkington Sur. D.&A. 4,015 ft.

West Tuleta—Bee County

Blanco Oil Co. and Buchanan No. 1 Ed Staus, C Blk. 11, J. Uranga Gr. T.D. 4,002 ft. D.&A.

Alta Mesa—Brooks County

California Co. No. 1 Jones, La Mestina de Gonzalina Gr. D.S.T. 1,707-16 ft.; showed gas with strong sulfur odor. Cg. 2,970 ft.

Alta Verde—Brooks County

L. & W. Oil Co. No. 1 Wm. Singer, Blk. 8, Sur. 436. S.D. 185 ft.; (cor.).

Nordan & Morris No. 4 Singer, Sur. 312. T.D. 891 ft.; tested oil and S.W.; prep. D.D.

Dick Young No. 5 Singer, Blk. 12, Sur. 312. T.D. sh. 1,001 ft.; stdg.

Branyon—Caldwell County

Adams & Lyles No. 3 Ellison, D. Cooper Sur. Cg. 2,047 ft.

Lincoln Pet. Co. No. 3 Brown, D. Cooper Sur. Drlg. 2,041 ft.

Taylor Ref. Co. No. 2 Branyon, D. Cooper Sur. Drlg. 1,107 ft.

Whisenant & Trenchard No. 3 Brown, J. R. Miller Sur. T.D. 2,225 ft. Comp. No gauge.

Whisenant & Trenchard No. 1 McGee, John Neil Sur. Drlg. 1,726 ft.

McCroy—Caldwell County

Whisenant & Trenchard No. 1 McGee, John Neil Sur. Drlg. 837 ft.

Charamousca—Duval County

N. V. Duncan No. 1 Wordon-Drought, Sur. 151. Drlg. 1,593 ft.

Colmena—Duval County

Conservative Oil Co. No. 2 D.C.R.C.-Sentz, 133 ft. N Eline, 1,200 ft. SE line, Blk. 12, sec. 51. S.D. 1,544 ft.

Driscoll—Duval County

Continental Oil Co. No. 13-A Sevier, Sur. 448. M.I.M.

El Mesquite—Duval County

Hamil & Smith No. 3 J. Benavides, Subd. 2, El Mesquite Gr. Loc.

Rogers & Rogers No. 3 Pena, El Mesquite Gr. R.U.

Government Wells—Duval County

Highland Oil Co. No. 2 Hester, Sur. 117, Loc.

L. & R. Oil Co. No. 3 Webb, 12-ac. tr., Sur. 41, Loc.

Magnolia Pet. Co. No. 4 Johnson, Sur. 44, R.U.

Hoffman—Duval County

Bridwell Oil Co. and Gorman-Yoakam Drlg. Co. No. 1 Hoffman, Sur. 117, Sd. 2,800-10 ft. Good S.O. Set 7-in. csg. 2,800 ft. W.O.C. T.D. 2,811 ft.

Bridwell Oil Co. No. 4-B Sutherland, 330 ft. S and E lines, sec. 112. Set csg. on sd. 2,751-73 ft. Drlg. plugs.

Standard of Kansas No. 8-A Hoffman, Sur. 118, Loc.

Kohler—Duval County

Humble O. & R. Co. No. 2 Peters, 330 ft. N and W lines, Sur. 398, Drlg. O. sd. 2,653 ft.

Sun Oil Co. No. 1 Peters, 330 ft. S and W lines, Sur. 161, Drlg. 1,325 ft.

Labbe—Duval County

Mills Bennett Prod. Co. No. 5 Yates, Sur. 560, Drlg. 1,060 ft.

Loma Novia—Duval County

Bridwell O. Co. No. 15-A Hubbard, Sur. 71, Spudded.

Eastern Texas Prod. Co. No. 5 Hubbard, Sur. 71, R.U.

Humble O. & R. Co. No. 16-B Hubbard, 320-ac. tr., Sur. 83, T.D. 2,740 ft. Comp. 24 B.P.H.

Humble O. & R. Co. No. 17-B Hubbard, 320-ac. tr., Sur. 83. Set screen and liner 2,759 ft.

Humble O. & R. Co. No. 16-C Welder, Sur. 554. Sd. 2,704-16 ft. Comp. 7 B.P.H.

Humble O. & R. Co. No. 17-C Welder, Sur. 554. Drlg. sh. 2,710 ft.

Magnolia Pet. Co. No. 49 Hahl, Sur. 67. Sd. 2,713-28 ft. Comp. 144.52 B.P.D. on ½-in. ck.

Magnolia Pet Co. No. 50 Hahl, Sur. 67. Drlg. 2,655 ft.

Magnolia Pet. Co. No. 6 Herbst, Sur. 70. T.D. 2,732 ft. sd. Testing.

R. Ogden No. 1-G Ruiz, 330 ft. S and W lines, 80-ac. tr., sec. 41. Testing sd. 2,595 ft.

Rosan Oil Co. No. 4-A Hubbard, Sur. 71, M.I.M.

Sun Oil Co. No. 1-B Hubbard, Sur. 82. Sd. 2,787-92 ft.; oil odor; tested dry. Cg. 2,832 ft.

Wollert & Masten No. 1 Bishop, S½ Sur. 74. T.D. 3,507 ft. D.&A.

Loma Vista—Duval County

Atlantic Ref. Co. No. 1-A Welder, Sur. 103. Set 10¾-in. csg. 39 ft. W.O.C.

Lopez—Webb—Duval Counties

Cox & Hamon No. 12 Peters, Sur. 322. Drlg. 1,517 ft.

Cox & Hamon No. 16 Peters, Sur. 322. Comp. 80 B.P.D. T.D. 2,098 ft.

Cox & Hamon No. 22 Peters, Sur. 322. Comp. 15 B.P.H. T.D. 2,139 ft.

Cox & Hamon No. 24 Peters, Sur. 322. Comp. 480 B.P.D. T.D. 4,128 ft.

Cox & Hamon No. 32 Peters, Sur. 322. Comp. 60 B.P.D. T.D. 2,160 ft.

Glen Harroun No. 1-A Lopez, Sur. 110. Set csg. 2,259 ft.; reblding. drk.

Humble O. & R. Co. No. 1 D.C.R.C., Sur. 901, Loc.

Humble O. & R. Co. No. 3-C D.C.R.C., Sur. 901, Loc.

Magnolia Pet. Co. No. 27 Peal, Sur. 382. T.D. 2,103 ft. Comp. 3,000,000 ft. gas.

Magnolia Pet. Co. No. 28 Peal, Sur. 382, R.U.

Mortimer & Springer No. 2 Montemayor, Sur. 114. Comp. 18 B.P.H. T.D. 2,235 ft.

Mortimer & Springer No. 9-B Peal, Sur. 794. Set csg. 2,182 ft. Comp. 20 B.P.H.

Sierra Oil & Roy. Co. No. 1-B Billings, Sur. 115. Comp. 20 B.P.H on ½-in. ck. Sd. 2,208-36 ft.

Peters—Duval County

Mills Bennett Prod. Co. No. 6 Peters, Sur. 178. Sd. 2,605-12 ft. Comp. 252 B.P.D. on ½-in. ck.

Piedra Lumbre—Duval County

Magnolia Pet. Co. No. 3 D.C.R.C., Sur. 97. Cg. 2,654 ft.

Seven Sisters—Duval County

Humble O. & R. Co. No. 14 Badgley, Sur. 307. Rng. tbg. 2,524 ft. Comp. 27 B.P.H.

Humble O. & R. Co. No. 15 Badgley, Sur. 307. Set screen and liner. T.D. sd. 2,507 ft.

Humble O. & R. Co. No. 16 Badgley, Sur. 307. Drlg. 72 ft.

Humble O. & R. Co. No. 35 Smith, Sur. 382. T.D. 2,469 ft. Comp. 37 B.P.H.

Humble O. & R. Co. No. 36 Smith, Sur. 382. Set csg. 2,455 ft.; W.O.C.

Reliance Oil & Roy Co. No. 18 Drummond, 240-ac. tr., Sur. 308. Sd. 2,463-82 ft. Comp. 26.8 B.P.H.

Texas Co. No. 4 Badgley, Sur. 307. Swbg. 2,506 ft.

Wellington Oil Co. No. 19-A Welder, Sur. 382. Set csg. 2,450 ft.; W.O.C.

Wellington Oil Co. No. 20 Welder, Sur. 382. T.D. 2,449 ft. Comp. 16 B.P.H. on ½-in. ck.

Westheimer & Daube No. 24 Campos, Sur. 224. Comp. 25.56 B.P.H. on ⅝-in. ck. Sd. 2,670-2,710 ft.

Westheimer & Daube No. 18 Campos, 1,650 ft. W line, 2,310 ft. N line, Sur. 224, D.&A. 2,779 ft.

Pearsall—Frio County

Amerada Pet. Corp. (Davis) No. 1 Halff & Oppenheimer, 329-ac. tr., J. C. Clare Sur. 336½. (W.O.); flwd. 130 B.P.D. then b.idged; swbg. some oil.

Amerada Pet. Corp. No. 8 Halff & Oppenheimer, S. A. Ditch Sur. 1,104. Drlg. 1,817 ft.

Amerada Pet. Corp. No. 7 Oppenheimer, 1,320 ft. W line, 330 ft. S line, Gibson Sur. 16. (W.O.); drlg. 5,317 ft.

Maetz—Goliad County

Belmont Oil Corp. No. 1 Hoff, B.S.&F. Sur. No. 7. Drlg. 3,197 ft.

North Pettus—Goliad-Karnes Counties

Magnolia Pet. Co. No. 6 Welden, J. Gomez Sur. T.D. 4,050 ft.; P.B. 3,724 ft. Washing for comp.

H. H. Weinert, Inc., No. 1 Porter, Victor Blanco Sur. Drlg. 4,281 ft.

Clark—Guadalupe County

R. B. Byrd No. 1 Jahn, Dewitt Sur. Drlg. 2,516 ft.; no shows.

Diamond Halff Oil Co. No. 2 Larison, G. DeWitt Sur. M.I.M.

Mercedes--Hidalgo County

Union Sulphur Co. No. 10 American Rio Grande L. & L. Co., Blk. 50, Tr. 2,418, N. Caprisallo Dist. T.D. 8,306 ft. Cutting tbg. 6,820 ft.

Mestanos—Hidalgo County

McCollum Explin. Co. No. 1-B Engleman, Lot 8, sec. 249. Drlg. 4,011 ft.

McCollum Explin. Co. No. 1 MacDougall, Lot 232, sec. 249. Drlg. 5,339 ft.

Samfordyce—Hidalgo-Starr Counties

Harrison and Danvers No. 2-A Villalon, Tr. 252, Porc. 39, R.U.; S.D.

Harrison & Danvers No. 3 Guerra, 230 ft. N line, 730 ft. E line, Sh. 251, Porc. 38, Drk.

Phillips Pet. Co. No. 2 Seabury, Tr. 256, Porc. 38, Spudded.

Weekly Oil Corp. No. 3 Lula George, Sh. 13, Porc. 41, Drk.

Colorado—Jim Hogg County

J. H. Meek, No. 5-A Martinez, 1,650 ft. E line, 1,550 ft. N line, Sur. 623, M.I.M.

Bentonville—Jim Wells County

Camp Drlg. Co. No. 1-B Pope, 330 ft. S and E lines, 320-ac. tr., sec. 13. Sd. 5,415-20 ft.; S.W.; T.D. 5,905 ft. D.&A.

La Jita Corp. No. 2 Bowers, 330 ft. N line, 990 ft. E line, sec. 14. Drlg. 3,697 ft.

La Jita Corp. No. 3 Bowers, 990 ft. N and E lines, Sec. 14. R.U.

Premont—Jim Wells County

Francis & Simonton No. 1 A. Lozana, Jr., 185 ft. E line, 165 ft. S line, Lot 111, sec. 36. No report.

Tom Graham and Gilcrease Oil Co. No. 1 Escobas, 330 ft. N and E lines, Blk. 4, sec. 25, Buffalo-Tex Subd., Escobas ranch, S.D.; M.I.R.

Tom Graham No. 1 Wm. Singer, C Lots 71 and 74, Sur. 76. T.D. 3,400 ft. P.B. 3,163-67 ft.

Sandia—Jim Wells County

Geo. Smith No. 1 Wade, Lot 2, Wade Ranch, Drk.

J. E. Walsh No. 2 Wade, Lot 2, Blk. C, Bode Subd. Stdg. 2,040 ft.; (corrected).

Lucas—Live Oak County

Houston Oil Co. No. 37 Cartwright, 1,300 ft. W. 300 ft. S. No. 35, F. Botillo Sur. M.I.Rig.

Houston Oil Co. No. 3 Sellers, W. J. Cannon Sur. T.D. 4,776 ft. D.&A.

Oakville—Live Oak County

Ohio Fuel Oil Co. No. 1 Rosebrocks, Romero Sur. Sd. 2,138-45 ft. Slight show O.&G. D.S.T. 2,134-45 ft. rec. 90 ft. S.W.

Calliham—McMullen County

Joe Coursey No. 3 Lark, Blk. 101, Scrugham Sur. Cg. 597 ft.

W. P. Howard No. 6 Claunch, M. Hely Sur. Cg. 427 ft.

Loma Oil Co. No. 47-A Jacob, sec. 10, Scrugham Sur. Set csg. 945 ft.; drlg. in.

Loma Oil Co. No. 11-F Jacob, Fadden Sur. Set csg. 943 ft. Comp. 15 B.P.D.

National Pet. Co. No. 2-B Lark, Jacob Sur. Drlg. 135 ft.

Rhodes—McMullen County

Humble O. & R. Co. No. 1 Edrington, 330 ft. S and W lines, sec. 57, A.B.&M. Sur. Sd. 3,052-64 ft.; tested S.W.; T.D. 3,162 ft. D.&A.

Humble O. & R. Co. No. 2 Edrington, 330 ft. S and W lines, SE¼, Sur. 59, M.I. Rig.

Ina—Medina County

Ina O. & R. Co. No. 3 Viola Wilson, Durst Sur. Drlg. 400 ft.

Agua Dulce—Nueces County

Stoddart & Moss No. 1 Colman, 330 ft. NW and NE lines, SE¼ SW 330-ac. tr., sec. 206. Drlg. 5,377 ft.

Texon Drlg. Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line, 3,054-ac. tr., A. Longorio Gr. (Workover). Drk.

Texon Drlg. Co. No. 2-B Sevier, 880-ac. tr., W. W. Chapman Lds., Palto Alto Gr. Set 16-in. csg. 300 ft.; W.O.C.

United Prod. Corp. No. 2 W. W. Walton, Lot 5, Sh. 1, Chapman Lds. Subd. Sd. 5,330-46 ft. Completing.

Clara Driscoll—Nueces County

Blanco Oil Co. and Buchanan No. 1 W. S. Gandy, 330 ft. S and W lines, E½ sec. 60. Drk. W.O.W.

Conroe Drlg. Co. and H. M. Reed No. 1 Meyers, Lot 4, Blk. F, Driscoll townsite, sec. 107. Drk.

W. D. Hines No. 1 Sevier, 280 ft. S and E lines, W½, sec. 60. Sd. 5,710-30 ft.; set 5½-in. csg. 6,035 ft. Perf. 5,720-25 ft. Swbg.

Hiram Reed No. 2 Roper, C Lot 1, sec. 108. Perf. 3,901-05 ft.; gas and wtr.; to P.B. and perf. in 3,800-ft. sd. W.O.W.

Magnolia Pet. Co. No. 1 Clara Sevier, 330 ft. N and W lines, 240-ac. tr., R. Russell Sur. D.S.T. 3,817-20 ft. 1,680 ft. oil and 180 ft. sd; no water; set 7-in. csg. at 3,816 ft. W.O.C.

H. M. Reed No. 1 Holloway, 330 ft. S and E lines, 51.8-ac. tr., sec. 108, R.U. W.O.W.

Wellington Oil Co. No. 1-A Sevier, 125-ac. tr., Wm. Gamble Sur. Drlg. 5,880 ft.

Wellington Oil Co. No. 7 Sevier, 2,310 ft. S line, 330 ft. E line, tr., Wm. Gambel Sur. Drlg. 2,217 ft.

Flour Bluff—Nueces County

Humble O. & R. Co. et al No. 1 Cordez, C Lot 12, Blk. 48, Loc.

Humble O. & R. Co. No. 1 Jose Miller, C Lot 26, sec. 47. Perf. 6,644-58½ ft; cleaning.

Humble O. & R. Co. No. 2 Phillips, C Lot 26, sec. 47. Set csg. 1,045 ft. W.O.C.

Humble O. & R. Co. No. 3 Phillips, C Lot 7, Blk. 48. Drlg. sh. 1,050 ft.

Humble O. & R. Co. et al No. 4 Phillips, C Lot 1, Blk. 55, Loc.

Humble O. & R. Co. No. 1 D. Reed, C Lot 28, Blk. 47. Drlg. sh. 1,033 ft.

Humble O. & R. Co. No. 1 Webb, C Lot 11, Blk. 47. Set csg. 6,680 ft. sd. W.O.C.

Humble O. & R. Co. No. 1 Webster, C Lot 23, Blk. 48. T.D. 6,661 ft. Running screen and liner.

S. Paul No. 1 Moulter, Blk. 16, sec. 41, Encinal Garden tracts, Loc.

Saxet Heights—Nueces County

Wm. Brady No. 1 Perkins, C Lot 49, Country Club Pl. T.D. 3,117 ft.; D.S. stuck.

Callihan Bros. and Whitley No. 1 Hartley, Villareal Sur. R.U.

J. K. Culton No. 10 Baldwin, 660 ft. SW of No. 9, 330 ft. SE line, lse., Villareal Sur. Loc.

D. & S. Drlg. Co. No. 1 Meany, 53.41-ac. tr., Villareal Gr. S.D. 3,710 ft.

Genro & Roosth No. 1 Caddell, C Lots 3, 4 and 5, Blk. "D," Harbor View Ests. Sd. 4,045-80 ft.; set csg. 4,080 ft.; S.D.

Tom Graham No. 2 Carver, 2.5-ac. tr., Ellendale Gardens, Sd. 4,060-4,110 ft.; perf. csg.

Chas. F. McGrew No. 3 Kelly, 19-ac. tr. Sd. 4,060-90 ft.; set csg.; S.D.

Morgan Bros. No. 2 Bender, Blk. C, Harbor View Estates. T.D. 4,085 ft.; failed to flow; S.D.

W. N. Paul No. 2 Schallert, C Blk. "C," Harbor View Addn. S.D. 1,800 ft.; W.O.

Pedernal Oil Co. No. 1 John, Blk. 14, Oak Park Addn. S.D. 4,110 ft.; orders.

Port O. & G. Co. No. 2 Corpus Christi College, 39.6-ac. tr. Set csg. 4,090 ft.; drlg. plug.

Port O. & G. Co. No. 3 Cohen, Villareal Sur. R.U.

J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47, Country Club Pl. Sd. 4,070½-83 ft.; set csg.; completing.

Renwar Oil Co. and Maryland Corp. No. 2 Guarantee Title & Trust Co., Lot 6, Blk. 9, Villa Gardens, R.U.

Saxet O. & G. Co. No. 3 Edwards, 1,371 ft. SW line, 165 ft. NW line, 32-ac. tr. Sd. 4,077-4,118 ft.; tested S.W.; S.D.; W.O.O.

Sam Wilson No. 2 Glover Johns, Villareal Sur. Drlg. 4,061 ft.

Saxet—Nueces County

Allen & Morris No. 1 Hocker & Sevier, 330 ft. N Shell Rd., 330 ft. W line, 100-ac. tr. Sd. 4,823-40 ft. Tested 600 ft. oil. Set 7-in. csg. 4,833 ft. W.O.C.

C. Andrade No. 3 Franks, 330 ft. N and E lines lse., Sur. 500. Sd. 5,828-34 ft. Set csg. W.O.C.

C. Andrade No. 1 Morgan, 330 ft. N and E lines lse., Sur. 592. Sd. 4,550-84 ft. Set csg. W.O.C.

Paul Benedum No. 1 Harmon, 330 ft. S and E lines, 50-ac. tr., Sur. 416. Sd. 6,320-36 ft. Blew out and burned 24 hrs. before shutting in. Stdg. C.P. 1,750 lbs.

Benson Drlg. Co. No. 1 R. Morgan, 330 ft. and W lines, 80-ac. tr. D.&A. 4,483 ft.

R. B. Bryant No. 5 Frank, 660 ft. E No. 3, 330 ft. S line, Sur. 416. Drlg. 4,329 ft.

Bryant & Howell No. 1 Kocurek, 330 ft. N and E lines, 58-ac. tr., Smith Sur. 25. Spudding.

R. B. Bryant No. 5 Scoggin, Sur. 315. D.&A. 4,662 ft.

R. B. Bryant No. 6 Scoggin, 330 ft. N and E lines tr., Sur. 315. Drlg. 3,120 ft.

R. B. Bryant No. 9 Scoggin, Sur. 315. Drlg. 2,500 ft.

Conservative Oil Co. No. 2 Morgan-Clark, 330 ft. S and W lines, W½ NW¼ sec. 405. Cg. 4,120 ft.

Conservative Oil Co. No. 2 R. Morgan, 109-ac. tr., Sur. 403. Sd. 5,824-31 ft. Set csg. W.O.C.

Conservative Oil Co. No. 1-A Rand Morgan, 80-ac. tr., Sur. 315. Set csg. 4,579 ft. W.O.C.

L. Glasscock No. 2 Hunter, 159-ac. tr., Page Sur. Cg. sd. 5,850 ft.; show S.W. Drlg. 6,220 ft.

Great States Oil Co. and Violet Oil Corp. No. 7 McGregor-Belk, Sur. 311, Sd. 5,831-39 ft.; tested S.W. Drlg. 6,110 ft.

Hiawatha Oil Co. No. 6 Griffith, 330 ft. S line, 3,084 ft. E line, Sur. 416, Sd. 6,303-18 ft. Cutting drl. pipe 5,600 ft.

Hiawatha Oil Co. No. 6 Hutchins-Stillwell, Blk. 30, Sheppard Farm Lots, R.U.

Hiawatha Oil Co. No. 7 Hutchins-Stillwell, Blk 30, Sheppard Farm Lots. Drlg. 5,327 ft.

W. B. Hinton No. 5 Cole, 330 ft. N and W lines, 60-ac. tr., Villareal Sur. Sd. 4,867-76 ft. Perf. 4,863-75 ft.

Houston Oil Co. No. 2 Isensee, Lot 2, Sur. 13 (W.O.); Old T.D. 4,869 ft. Comp. 233 B.P.D Perf. 4,518-28 ft.

Houston Oil Co. No. 10 McGregor, 135-ac. tr., Sur. 582. Sd. 5,792-5,823 ft. Drlg. plugs.

Houston Oil Co. No. 11 McGregor, 135-ac. tr., Sur., 582. Sd. 5,809½-19 ft. Comp. No guage.

Houston Oil Co. No. 14 Morgan, 2,310 ft. S line, 330 ft. W line, 493-ac. tr. R.U.

Magnolia Pet. Co. No. 4 W. W. Walton, 150 ft. S Shell Rd., 330 ft. W line lease, Page Sands Sur. R.U.

Pan American Prod. Co. No. 3-A Morgan, 40-ac. tr. Set csg. 1,150 ft. W.O.C.

Pan American Prod. Co. No. 4-C Morgan, 90-ac. tr., Sur. 403. Sd. 6,248-81 ft. Tested some oil. W.O.C.

Pan American Prod. Co. No. 3-A Sagarin, 39-ac. tr. Sd. 5,813-28 ft. Rng. csg.

Pan American Prod. Co. No. 3-B Sagarin, Sur. 500. Drlg. 4,195 ft.

Phillips Pet. Co. No. 5 Hutchins, 60-ac. tr., Blks. 29 and 30, Sheppard Farm Lots. Drlg. 5,777 ft.

Phillips Pet. Co. No. 4 Morgan, Sur. 405. Drlg. 6,250 ft.

Renwar Oil Co. and Andrade No. 7 McGregor-Belk, Sur. 311. Drlg. 3,670 ft.

Renwar Oil Co. and Maryland Oil Co. No. 4 Rand Morgan, 660 ft. E of No. 3, 330 ft. N line lse., Surs. 315 and 592. Sd. 4,552-70 ft.; set csg.; perfg.

Republic Nat. Gas Co. No. 15 Dunn, Blks. 37 and 38, Sheppard Farm Lots. Sd. 6,309-26 ft. Set csg. 6,317 ft. W.O.C.

Republic Nat. Gas Co. No. 16 Dunn, Blk. 37, Sheppard Farm Lots. Sd. 6,310-32 ft. Set csg. W.O.C.

Republic Nat. Gas Co. No. 1 Ordner, 219-ac. tr., Sur. 403. Sd. 5,811-28 ft. Set csg. W.O.C.

Richardson Pet. Co. No. 5 Cain & Secrist, Blk. 23, Russell Farm Lots. Drlg. 3,217 ft.

Richardson Pet. Co. No. 4 Quiros, Blk. 40, Sheppard Farm Lots. Drlg. 480 ft.

Southern Minerals Corp. No. 1 Bernson, 330 ft. N and E lines, 120.45-ac. tr., Sur. 40. Sd. 4,080-98 ft. Comp. No gauge.

Southern Minerals Corp. No. 19 Bliss, 398 ft. N line, 446 ft. W line, N 120-ac. tr., Sur. 405. Cg. 5,797 ft.

Southern Minerals Corp. No. 7 Isensee, Sur. 404. Set csg. 911 ft.; sd. 4,405-25 ft.; reworking.

Southern Minerals Corp. No. 8 Smith, Blk. 4, Sheppard Farm Lots. Sd. 4,410-25 ft. Comp. No gauge.

Southern Minerals Corp. No. 1 Till, 990 ft. S line, midway E and W lines, 52.6-ac. tr., Page Lds. Sur. T.D. 6,605 ft.; perf. csg. 4,862-69 ft. Comp. No gauge.

Stamer O. & G. Co. No. 1 Cox & Cryder, 330 ft. N line, 990 ft. E line tr., Sur. 166 and 316. Drlg. 1,017 ft.

Texon Drlg. Co. No. 5 Carter, 219-ac.tr., Sur. 316. No report.

Texon Drilling Co. No. 2 Isensee, 150 ft. N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Sd. 4,415-35 ft. Comp. 131 B.P.D. on 5/32-in. ck.

Texon Drlg. Co. No. 5 Scoggin, 144-ac. tr., Sur. 315. Sd. 4,430-36 ft. Comp. No Gauge. 7-in. at 4,426 ft.

Texon Drlg. Co. No. 1 Buckholt, 330 ft. S and E lines, 19.14-ac. tr., Sur. 402 and 316. Spudded.

Texon Drlg. Co. No. 4 Carter, 219-ac. tr., Sur. 316. Set 10¾-in. csg. 300 ft. W.O.C.

Texon Drlg. Co. No. 3 Vance, Thos. Gallagher Sur. Drlg. 1,200 ft.

W.A.R. Oil Co. No. 4 Buckholt, 330 ft. N and E lines, 258.9-ac. tr., Sur. 316. Drlg. 3,234 ft.

W.A.R. Oil Co. No. 1 Hutchins, Sur. 416. (W.O.); old T.D. 4,200 ft.; cg. 6,413 ft.

Wynne Drlg. Co. No. 3-A R. Morgan, 80-ac. tr., Sur. 315. Drlg. 4,032 ft.

Wynne Drlg. Co. No. 3-B Morgan, 330 ft. S and W lines, 80-ac. tr., Surs. 315 and 592. M.I.M.

Plymouth—San Patricio County

Deep Oil Corp. No. 6-F Welder, 646.56-ac. tr., sec. 46. Drlg. 187 ft.

Humble O. & R. Co. No. 4 Bevly, Blk. 1, sec. 35. Drlg. sh. 5,283 ft.

Magnolia Pet. Co. No. 11 Corpus Christi Bank, sec. 24, Fourth Addn., Taft Lds. Drk.

Plymouth Oil Co. No. 65-C Welder, sec. 71. Drlg. 3,365 ft.

Plymouth Oil Co. No. 64-C Welder, sec. 71. Set 7-in. csg. 5,646 ft. W.O.C.

Sun Oil Co. No. 8 Hunt, Blks. 5 and 6, sec. 34. Oil sd. 5,627-37 ft.; set csg. 5,637 ft. Comp. 183 B.P.D. on 9/64-in. ck.

Taft Field—San Patricio County

Atlantic Ref. Co. No. 3 Pullin, 330 ft. N line, 380 ft. W line, 40-ac. tr., Lot 4, sec. 1, Second Addn. R.U.

Cage Prod. Co. No. 7 Mayo, 9,560 ft. W line, 990 ft. S line, 60-ac. tr., Ottman Sur. Loc.

Humble O. & R. Co. No. 7 Mayo, 150 ft. S and E lines, 640-ac. tr., Ottman Sur. Drlg. 1,827 ft.

Humble O. & R. Co. No. 10 Mayo, Wm. Burns Sur. T.D. 4,375 ft. Perf. 4,351-75 ft. Comp 241 B.P.D. on ¼-in. ck.

Humble O. & R. Co. No. 11 Mayo, 670 ft. E line, 330 ft. S line, 320-ac. tr., Ottman Sur. Drlg. sh. 3,640 ft.

Humble O. & R. Co. No. 13 Mayo, 799 ft. S line, 330 ft. E line, 320-ac. tr., Ottman Sur. R.U.

Cuevitas—Starr County

Barbara Oil Co. No. 1 Pardue, Javali Gr. D.&A. 2,660 ft.

Los Olmus—Starr County

Ted Stone No. 1 Kelsey-Bass, Porc. 87, J. of Camargo, Sd. 400-08 ft.; tstg.

Margo—Starr County

Braden & Richards No. 1 L. Garcia, C 20-

ac. tr., Sh. 7-B, Porc. 71. Oil sd. 394-96 ft.; S.O.; S.D.

Rio Grande City—Starr County

Sam Adams No. 1 Garza, Sh. 20-A, Porc. 80. S.D. 524 ft.
Coreta Oil Co. No. 5 Doyno, Blk. 1, Tr. 77-A, Porc. 81. Spudded; S.D.
Fech Oil Co. No. 12 Doyno, Blk. 4, Tr. 77-A, Porc. 81. Spudded; W.O.O.

Carolina-Texas—Webb County

E. J. Sawyer No. 2 Webster, 330 ft. S line, 1,980 ft. W line, Sur. 684. T.D. 3,106 ft. D.&A.

Cole—Webb County

L. H. Sexton No. 1 R. Benavides, Blk. 4, Sur. 22, Cole Subd. T.D. 3,050 ft. D.&A.

Las Albercas—Webb County

Frank Garvis No. 12 Yeager-Strohman, Sh. 5, Las Animas Gr. Drlg. 2,367 ft.

O'Hern—Webb County

Hamil & Smith No. 14 Benavides, Blk. 312, Hale Subd. T.D. 2,901 ft. Comp. 40 B.P.D.
Hamil & Smith No. 15 Benavides, O'Hern Subd. Testing 2,897 ft.
Hamil & Smith No. 16 Benavides, O'Hern Subd. Spudded.
Hamil & Smith No. 37 Benavides, O'Hern Subd. Drlg. 2,521 ft.
Magnolia Pet. Co. No. 17 S. Benavides, O'Hern & Seacord Subd. Cg. 2,842 ft.
H. J. Porter No. 8 Benavides, Blk. 315, Hale Subd. S.D. 2,897-2,903 ft.; testing.
H. M. Reed No. 4 Benavides, Blk. 299, Hale Subd. R.U.
Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173. M.I.M.

Charco Redondo—Zapata County

W. C. Bob No. 2 Martinez, S¼, Blk. 22, Qandudo Grant. M.I.M.

Cuellar—Zapata County

Nordan & Morris No. 2 Cuellar, Cerrito Blanco Gr. Cg. 1,581 ft.

Escobas—Zapata County

Sam Evans No. 1 Garza, Blk. 19, Zorro ranch. R.U.
G. E. Glasco No. 4-M Garzo, W½, 40-ac. tr., Covintas Gr. (workover). O.T.D. 1,348 ft. to D.D.
H. & R. Oil Co. No. 5 Garza, 185 ft. SW line, 584 ft. NW line, Blk. 11, Douglas Subd. Set csg. on sd. 1,240 ft. Comp. 25 B.P.D.
H.&R. Oil Co. No. 6 Garza, Blk. 11, Douglas Subd. R.U.
H.&R. Oil Co. No. 4-A Garza, Blk. 11, Douglas Subd. Sd. 1,230-40 ft.; set csg.; W.O.C.
Glen Harroun No. 3 Garza, Blk. 10, Douglas Subd. T.D. 1,420 ft. D.&A.
O. W. Kilam No. 9 Medina, Sh. 34, Fansler Part. Loc.
B. W. Roscoe No. 5 Garza, Share 33, Douglas Subd. Testing sd. 1,200-08 ft.
Frank Schneider No. 5 Garza, Blk. 21, Douglas Subd. Testing 1,152 ft.
Texas Co. No. 94 Jennings, 250 ft. S No. 7, Cerrito Blanco Gr. Drlg. shaly sd. 2,496 ft.

Haynes—Zapata County

Gilcrease O. Co. No. 17-G Haynes, Blk 8, Haynes Subd. Comp. 40 B.P.D. T.D. 963 ft.
J. D. Long No. 1 Phelps, Villa Gr. R.U.
Magnolia Pet. Co. No. 2 Haynes, Blk. 7, Haynes Subd. Testing 1,062 ft.
Magnolia Pet. Co. No. 5 Haynes, Blk. 7, Haynes Subd. Spudded.
Magnolia Pet. Co. No. 6 Haynes, Blk. 7, Haynes Subd. Comp. 50 B.P.D. T.D. 1,110 ft.
McKay & Upchurch No. 15 Haynes, Blk. 7, Haynes Subd. Cg. 913 ft.
McKay & Upchurch No. 16 Haynes, Blk. 7, Haynes Subd. Loc.
United Prod. Co. No. 7 Haynes, Blk. 13, Gunby Subd. Comp. 50 B.P.D. T.D. 982 ft.
United Prod. Co. No. 8 Haynes, Blk. 13, Gunby Subd. Comp. 50 B.P.D. T.D. 1,048 ft.
United Prod. Co. No. 9 Haynes, Blk. 13, Gunby Subd. S.D. 929-41 ft. Comp. 50 B.P.D.
United Prod. Co. No. 10 Haynes, Blk. 13, Gunby Subd. Loc.
United Prod. Co. No. 11 Haynes, Blk. 13, Gunby Subd. Testing 981 ft.
United Prod. Co. No. 12 Haynes, Blk. 13, Gunby Subd. Drlg. 645 ft.
Valley Osage Oil Co. No. 1 Haynes, Blk. 1e, Haynes Subd. Testing 1,044 ft.

E. C. TEXAS WILDCATS

Angelina County

Hicks et al No. 1 Morris, J. Morris Sur., 3 mi. E of Diboll. Drlg. 1,412 ft.
W. A. Stone et al No. 1 Southern Pine Lbr. Co., B. J. Thompson Sur., 8 mi. SE Lufkin. Drk.

Cherokee County

General Crude Oil Co. No. 1 L. S. Stockton, S. Jarboe Sur., 6 mi. NE of Jacksonville, Cored 4,394 ft. Recov. 4 ft. porous light brown sd.; odor and stain.
A. F. Richardson No. 1 F. P. O'Brien, G. S. Clapp Sur., 3 mi. NW of Rusk; 5,000-ft. test. Loc.

Falls County

R. M. Heffiin, No. 1 T. E. Battle, Marl Sur., 3 mi. SW of Marlin. S.D. 2,082 ft.
Thirteen Oil Co. No. 1 H. R. Roberts, N. Slatter Sur., 6 mi. SE of Lott, Pecan Gap 1,480 ft.; S.D. 1,560 ft.

Fannin County

Joiner & Owens No. 1 Goss-Morgan, J. Stephens Sur., 16 mi. N of Honey Grove. Drlg. 1,940 ft.
Styles & Smith No. 1 R. Stewman, J. W. Clark Sur., 2 mi. SE of Trenton. Drlg. 631 ft.

Freestone County

Everett Drlg. Co. No. 1 O. W. Killian, 790 ft. N, E 2,929 ft. E., E. J. Robins Sur. 6½ mi. SE of Fairfield. Loc.
Wheeler & Collins No. 1 W. R. Boyd, F. B. Cabler Sur., 4 mi. SW of Fairfield. M.I.R.
Yancey et al No. 1 Scott, Church Lot, H. Awalt Sur., W of Stewartsville. Fsg. 3,860 ft.

Henderson County

Cosden Oil Co. No. 1 Miller. Top Woodbine 4,898 ft. S.D. 5,155 ft.

Hunt County

Penn Oil Corp. et al No. 1 A. B. Manning, 5 mi. NE of Lone Oak, S. Owens Sur. Drk.

Lamar County

Lowery-Cutler No. 1 E. C. Porter, Thos. King Sur. Drk.

Leon County

J. B. Daniels et al No. 1 Carter. Drlg. 875 ft.
Roth & Faurot No. 1 J. L. Shaw, O. R. Reams Sur., 5 mi. N of Centerville. Drlg. 5,753 ft.

Limestone County

A. W. Phillips et al No. 1 E. M. Speight, M. Herrin Sur., 6½ mi. SE of Mexia. Drlg. 50 ft.

Nacogdoches County

L. C. Bonhan et al No. 1 Angelina Lbr. Co., in J. Gomez Sur., 14 mi. SE of Nacogdoches. S.D. 5,523 ft.
Collier et al No. 1 A. T. Mast, T. J. Lambert Sur. S.D. 5,630 ft. to rebuild drk.

Rains County

Humble and Tide Water Oil Co. No. 1 Easter, R. Hotchiss Sur., 5 mi. NW Alba. Drlg. 5,760 ft.

Red River County

Abercrombie and Harrison No. 3 Southern Pine Lbr. Co., D. D. Bruton Sur., 10 mi. NE of Clarkesville. Drlg. 2,110 ft.
Carpenter Oil Co. No. 1 R. E. Anderson, S. W. Sims Sur., 3 mi. N of Clarksville. S.D. 1,575 ft.
Roy I. Carter Drlg. Co. No. 1 J. A. Tutt, C 40-ac. tr. in D. Hart Sur., 2 mi. S of Avery. S.D. 80 ft.
M. Petroff et al No. 1 R. G. Morris, J. Guest Sur., 2 mi. W of Detroit. S.D. 20 ft.

Robertson County

J. E. Mills No. 1 T. Congelosi, C of 75-ac. tr. in G. A. Nixon Sur., 3½ mi. SW of Hearne. S.D. 2,200 ft.

Rusk County

John W. Merritt No. 1 J. A. Stallings, T. Uzzell Sur., 2½ mi. S of East Texas field. S.D. 3,926 ft.
Ben C. Lamb No. 1 Leath, L. J. Dooley Sur., 2½ mi. E of Pirtle; old test deepening; C.O. 4,740 ft.

Smith County

W. L. Cloud No. 1 Kendall. S.D. 2,794 ft.

Wood County

G. W. Nix et al No. 1 E. A. Russell, J. Delap Sur., SW cor. of county. S.D. 600 ft.

EAST TEXAS

(Border Counties)

Bowie County

Woodley & Bentley No. 1 Lumpkin, J. McDermott Sur., 1 mi. SW Dalby Spgs. Drlg. 4,310 ft.

Cass County

American Lib. No. 3-A Baugus, J. H. Rives Sur., Lot 12. Comp.; flw. 497 B.P.D.; T.D. 6,029 ft.
American Liberty No. 5-A Baugus, J. H. Rives Sur., Lot 10. Drlg. 3,700 ft.
American Liberty No. 2-B Baugus, Lot 14, J. H. Rives Sur. 5-in. cmt. 6,008 ft.; T.D. 6,022 ft.; W.O.C.S.
American Liberty No. 2 Sheppard, Lot 11, J. H. Rives Sur. Drlg. 4,387 ft.
American Liberty No. 1 White & Walker, 4½-ac. tr., J. H. Rives Sur. 10-in. cmt. 103 ft.
American Liberty No. 2 J. Wiley, SE cor. 58.86-ac. tr., J. Davenport Sur. Comp.; flw. 537 B.P.D.; T.D. 5,985 ft.
American Liberty No. 3 J. Wiley, 56-ac. tr., J. Davenport Sur. Comp.; flw. 372 B. P.D.; T.D. 5,986 ft.
American Liberty No. 4 J. Wiley, C E and W. line, 56-ac. tr., J. Davenport Sur. Loc.
American Liberty No. 5 J. Wiley, SW cor. lse, J. Davenport Sur. Loc.
Bay Oil Co. No. 1 G. E. Parker, SE cor. Greenham Sur. T.D. 6,050 ft.; reperf. and tstg.
Eastern Tex. Prod. Co. No. 1 Belote, H. Holbert Sur. D.S. stuck 5,335 ft.; T.D. 5,772 ft.
Gulf Prod. Co. No. 2 Dawson et al, NW cor. lse., J. H. Rives Sur. Drlg. 5,075 ft.
Gulf Prod. Co. No. 3 Dawson, J. H. Rives Sur. Loc.
P. L. Hoffman et al No. 1 Davis, James Smith Sur., SE cor. 58-ac. tr. Drlg. 2,000 ft.
H. L. Hunt No. 1 I.N.&C.L. Shelton, SE cor. 202-ac. tr., J. Davenport Sur. T.D. 5,994 ft.; tstg.
W. F. Lacey No. 1 J. Lewis, NW cor. B. E. Echols 17.4-ac. lse., H. Holbert Sur. Drlg. 4,000 ft.
Magnolia Pet. Co. No. 1 Allday Est., P. Evans Sur., SE cor. 87-ac. tr. Loc.
Magnolia Pet. Co. No. 12 J. E. George Est., John Collum Sur., NW cor. George tr. Drlg. 5,800 ft.
Magnolia Pet. Co. No. 14 J. E. George Est., NW cor. George tr., John Collum Sur. 7-in. cmt. 6,095 ft.; T.D. 6,100 ft.
Magnolia Pet. Co. No. 1 Lewis & Wilks, A. Archer Sur., SE cor. 20-ac. tr. Loc.
Magnolia Pet. Co. No. 1 J. B. McLeod, Cass Co. Sch. Ld. Sur., NW cor. sur. Loc.
Magnolia No. 1 Meda Green, SW cor. J. Davenport Sur. Cg. 6,033 ft.
Magnolia Pet. No. 3 Meda Green, James Davenport Sur., SE cor. 73-ac. lse. Drlg. 5,511 ft.
Magnolia No. 4 Meda Green, on Jesse Baugus 60-ac. tr., J. Davenport Sur. Comp.; flw. 9 B.P.H.; T.D. 6,050 ft.
Magnolia No. 5 Meda Green, James Davenport Sur., 245-ac. lse. Drlg. 4,135 ft.
Magnolia No. 2 Noel Est., Wm. B. Hughes Sur., NE cor. Noel lse. Drlg. 3,955 ft.
Magnolia Pet. Co. No. 5 Rives, SE cor. John Collum Sur. Rng. tbg.; T.D. 6,035 ft.; swbd. dry; W.O.
Magnolia No. 8 Rives, NE cor. John Collum Sur. Comp.; flw. 7 B.P.H.; T.D. 6,007 ft.
Magnolia No. 10 Rives, NE cor. John Collum Sur. Drlg. 5,250 ft.
Magnolia No. 11 Rives, John Collum Sur., 804 ft. SE of No. 6. Drlg. 4,900 ft.
Fagnolia Pet. Co. No. 1 H. F. Walker, Wilson Robinson Sur., SE cor. 102-ac. lse. Loc.
Magnolia Pet. Co. No. 2 H. F. Walker, Wilson Robinson Sur., SE SE cor. 102-ac. lse. Loc.
Magnolia Pet. Co. No. 3 H. F. Walker, Wilson Robinson Sur., NW cor. 102-ac. lse. Loc.
Magnolia Pet. Co. No. 4 H. F. Walker, Wilson Robinson Sur., NE cor. 102 ac. lse. Loc.
Magnolia Pet. Co. No. 5 H. F. Walker, Wilson Robinson Sur., SW cor. 102-ac. lse. Loc.
Magnolia No. 1 Thornton Hrs., Wilson Robinson Sur., NE cor. 30-ac. tr. Drlg. 3,353 ft.
Magnolia No. 1 Wall & McLeod, NE cor. 82-ac. lse., Alex Archer Sur. Cg. 6,040 ft.
Magnolia No. 2 Wall & McLeod, NW cor. 82-ac. lse, Alex Archer Sur. Cg. 5,990 ft.
Magnolia No. 3 Wall & McLeod, SE cor. 82-ac. lse., Alex Archer Sur. Cg. 5,995 ft.
Magnolia No. 4 Wall & McLeod, SW cor. 82-ac. lse., Alex Archer Sur. Drlg. 5,463 ft.
R. W. Norton No. 3 J. T. Moore, Wm. R. Myers Sur., 210-ac. tr. 6-in. cmt. 5,969 ft.; T.D. 5,990 ft.
Ohio Oil Co. No. 5 R. P. Willis, S.F.I.W. Sur. No. 1,263. Drlg. 1,600 ft.
Ohio Oil Co. No. 7 R. P. Willis, S.F.I.W. Sur. No. 1,263. Loc.
Ohio Oil Co. No. 9 R. P. Willis, S.F.I.W. Sur. No. 1,263, SW of No. 3. Drlg. 2,600 ft.
Ohio Oil Co. No. 10 R. P. Willis, 933 ft. S of No. 4, S.F.I.W. Sur. No. 1,263. Drlg. 5,600 ft.
Ohio Oil Co. No. 12 R. P. Willis, SE cor. 320-ac. tr., S.F.I.W. Sur. 1,263. Drlg. 4,413 ft.
Phillips Pet. Co. No. 1 Chew, SE cor. 207-ac. lse., Robt. Trammel Sur. Drlg. 1,198 ft.
Phillips Pet Co. No. 2 Chew, 1,460 ft. N, 326 ft. W, SE cor. W. D. Chew 207-ac. lse., Robt. Trammel Sur. Drlg. 4,612 ft.
Phillips Pet. Co. No. 3 Chew, 2,324 ft. N, 326 ft. W, SE cor. W. D. Chew 207-ac. lse., Robt. Trammel Sur. Drlg. 5,629 ft.
Phillips Pet. Co. No. 2 Farrier, on 200-ac. tr., Wm. Myers Sur. Drlg. 5,000 ft.
Phillips Pet. Co. No. 5 Farrier, Wm. R. Myers Sur. Loc.
Phillips Pet. Co. No. 6 Farrier, Wm. R. Myers Sur. Loc.
Phillips Pet. Co. No. 7 Farrier, Wm. R. Myers Sur. Loc.
Phillips No. 3 Farrier, Wm. R. Myers Sur., Sur., 220-ac. lse. Drk.
Phillips No. 4 Farrier, Wm. R. Myers Sur., 933 ft. W of No. 2. Drlg. 400 ft.
Phillips Pet. Co. No. 1 G. E. George, Wm. R. Myers Sur. T.D. 6,050 ft.; tstg.
Phillips Pet. Co. No. 1 Skinner, Hutchinson tr., S.F.I.W. Sur. No. 1,025. Drk.
Phillips Pet. Co. No. 2 Skinner, Hutchinson tr., S.F.I.W. Sur. No. 1,025. Drlg. 4,340 ft.
Phillips Pet. Co. No. 3 Skinner, 160-ac. tr., in S.F.I.W. Sur. No. 1,025. Cg. 5,982 ft.
Phillips Pet. Co. No. 1 M. Wasson, W. R. Myers Sur., 27-ac. tr. Cg. 5,958 ft.
Showers & Moncrief No. 6 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and 1,338 ft. W line, Loc.
Showers & Moncrief No. 8 T. D. and Sallie Stalcup, Robt. Trammel Sur., midway between E and W line of lse. Loc.
Spray Oil Co. No. 1 Scott, 25-ac. lse., midway N and S. Robt. Trammel Sur. Drlg. 5,702 ft.
Spray Oil Co. No. 2 Scott Adams, 25-ac. tr., Robt. Trammel Sur. R.U.
Superior Oil No. 5-A Chew, W.D.&C.C. Tract, Robt. Trammel Sur. Comp. flw. 499 B.P.D.; T.D. 5,985 ft.
Texas Co. No. 2 W. M. Hall, Alex Archer Sur., 664 ft. W of E line. Drlg. 4,359 ft.
Texas Co. No. 1 J. B. McLeod, W. A. Elliott Sur., 1,416 ft. W of E and 466 ft. S of N 160-ac. tr. Perfg.; flw. 205 bbls. 48 hrs.; tstg.; T.D. 6,114 ft.
Texas Co. No. 2 J. B. McLeod, W. A. Elliott Sur., 440 ft. E of W and 495 ft. S of N line of 160-ac. tr. Drlg. 4,000 ft.
Texas Co. No. 1 N. A. Rambo, C. C. Sch. Ld. Sur., SW cor. 160-ac. lse. Drlg. 4,350 ft.
Tide Water No. 1 W. D. Chew, Robt. Trammel Sur., 150 ft. N of S line, midway between E and W lines of 20-ac. lease. Derrick.
Tide Water No. 2 C. C. Chew, on 55-ac. tr., Robt. Trammel Sur. Drlg. 5,842 ft.
Tide Water No. 3 C. C. Chew, NW cor. 55-ac. tr., Robt. Trammel Sur. Drlg. 4,360 ft.
United Prod. Co. No. 2 G. W. Bibby Unit, Alex Archer Sur., Hartzo 20-ac. lse. Drk.
United Prod. Co. No. 3 G. W. Bibby Unit, Alex Archer Sur., 13-ac. Hartzo lse. R.U.
United Prod. Co. No. 4 G. W. Bibby Unit, Alex Archer Sur., 24-ac. tr. R.U.
United Prod. Co. No. 6 J. R. Jones Unit, SE cor. Ben J. Murray Sur. Comp.; flw. 43 B.P.H.; T.D. 6,025 ft.
United Prod. Co. No. 7 J. R. Jones Unit, SE cor. Ben J. Murray Sur. Rg. 6,055 ft.
United Prod. Co. No. 8 J. R. Jones Unit, SE cor. Ben J. Murray Sur. Comp.; flw. 37 B.P.H.; T.D. 6,022 ft.
United Prod. Co. No. 9 J. R. Jones Unit, Ben J. Murray Sur. Drk.
United Prod. Co. No. 10 J. R. Jones Unit, Ben J. Murray Sur. Drlg. 1,800 ft.
United Prod. Co. No. 1 Rambo Unit, Robt. Trammel Sur., 330 ft. N and W SE cor., Maden Rambo 40-ac. tr. Comp.; flw. 536 B.P.D.; T.D. 6,020 ft.
United Prod. No. 6 Rambo Unit, Robt. Trammel Sur., 150 N, 814 W SE cor. H. A. Thomas 83-ac. tr. Comp.; flw. 32 B.P.H.; T.D. 6,010 ft.
United Prod. Co. No. 7 Rambo Unit, Jas. Davenport Sur., H. A. Thomas 83-ac. tr. Drlg. 4,581 ft.
United Prod. Co. No. 8 Rambo Unit, Jas. Davenport Sur., H. A. Thomas 83-ac. tr. T.D. 3,000 ft.
United Prod. No. 8 J. T. Stewart Unit, John Collom Sur. of 81.9-ac. tr. Comp.; flw. 27 B.P.H.; T.D. 6,042 ft.
United Prod. Co. No. 9 J. T. Stewart Unit, John Collom Sur., 81-ac. tr. Loc.
United Prod. Co. No. 10 J. T. Stewart Unit, John Collom Sur., 48-ac. tr. Loc.
United Prod. No. 4-A J. T. Wall, Alex Sur., on J. T. and J. D. Wall 82-ac. trk. Comp.; flw. 54 B.P.H.; T.D. 6,075 ft.
United Prod. Co. No. 3 Tyson Unit, J. H. H. Rives Sur. 7-in. cmt. 6,158 ft.; T.D. 6,158 ft.; tstg.

Harrison County

Geyer Oil Co. No. 1 Alex Moore, 5 mi. SW of Waskom, C. W. Fields Sur. 10-in. cmt. 45 ft.; drlg. 480 ft.
Geyer Oil Co. No. 2-A Vincent, S. B. Harrison Sur. T.D. 2,452 ft.; tstg.
Hanover, Bergendoll et al No. 1 Buchanan, Wm. McIlvain Sur. T.D. 4,220 ft.; S.D.
H. H. Roberts et al No. 1 Z. Douglas, 8 Fields Sur. 10-in. cmt. 43 ft.; drlg. 800 ft.

Marion County

Tom Bell et al No. 1 David Lane, SW C Log 2, Jones Sur. T.D. 72 ft.; S.D.
Sam Lanier No. 1 Lucey Rives, SE cor. M. G. Wall Sur. T.D. 960 ft.; W.O.S.R.
Morefield & Prince No. 1 Benefield, NE cor. Robt. Potter Sur., 4 mi. W of Oil City, La. Drk.
Holcomb & Thomason No. 1 Lizzie Henderson, 330 ft. S and E, cor. Blk. 18, of Lizzie Henderson Subd., or 2,800 ft. S, 3,450 ft. E of NW cor. of R. Bennington Sur. Drlg. 3,798 ft.

Panola County

Danciger O. & R. Corp. No. 1 Tatum, SW cor. A. Bissell Sur. Drk.
Glassell & Glassell No. 1 Williamson, Mary Potts Sur. Cg. 4,950 ft.
Lawrel Pet. Co. No. 1 Bucknell, B. Anderson Sur. Cg. 5,300 ft.
Logansport P. L. Corp. No. 1 Rushing, M. Smith Sur. Acidized; tstg.; T.D. 2,734 ft.
Magnolia Pet. Co. No. 1 E. A. Hull, T. Applewhite Sur. Drlg. 5,860 ft.
Matex Oil Co. No. 1 Thomas M. Alstone, 3 mi. E of Elysian field. T.D. 5,036 ft.; prep. run csg.
White-Goodwin Synd. No. 1 Hill, Winnie Mann Sur. R.U.
Yandel Rogers No. 1 Cameron Lbr. Co., Mm. A. Lagrone Sur., 7 mi. N of Carthage. Loc.

Shelby County

Mulroy-Curtain et al No. 1 Hayden, D. G. Yardt Sur. T.D. 2,907 ft.; sh.; washing to bottom.
Potter & Rubeling O. H. Polly No. 1, Wm. Wisner Sur. T.D. 4,050 ft.; M.I.H.R.
Wm. Redditt No. 1 Pickering Lbr. Co., SE cor. Stephens English Sur. R.U.
Red Wing Oil Co. No. 1 C. H. Herton, 54-ac. tr. in J. Dowlin Sur. S.D. 1,889 ft.

NORTH TEXAS WILDCATS

Archer County

L. T. Burns No. 1 White, sec. 34, A.T.N. C.L. Sur. Loc.
L. T. Burns No. 1 J. S. Bridwell, sec. 1,866, T.E.&L. Sur. Drk.
Tom Looney No. 1 L. F. Wilson, sec. 71, A.T.N.C.L. Sur. Drlg. 1,100 ft.

Baylor County

Consolidated Oil Co. No. 3 Portwood Y, sec. 3,138, T.E.&L. Sur. Loc.
S. P. Morris et al No. 1-H C. T. Porter, E. Brown Sur. A-20. C.O.; T.D. 1,614 ft.

Clay County

Alexander & Goldsmith No. 1 Byers & Co., sec. 28, Byers Subd. Drlg. 1,810 ft.

Collin County

California Consld. Oil Co. No. 1 Fagg, Jas. Rutherford Sur. Sd. 2,700-71 ft.; test wtr.; S.D.O. 2,780 ft.
Port Bolivar O. & R. Co. No. 1 Durning, Wm. Creeger Sur. Sd. 3,940-44 ft.; tested wtr.; S.D.O.
Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Spudded and S.D.

Cooke County

Big Indian O. & D. Co. and No. 1 T. E. Mc-

Fadden, G. M. Bonds Sur. A-69. S.D.O. 2,053 tf.

Wm. D. Compton No. 1 P. Tucker, J. Barnett Sur. A-42. Drlg. 450 ft.

M. L. Harris No. 1 Williams, A. C. C. Bailey Sur. A-44. Testing S.S.O. 2,165-75 ft.

B. H. Hilburn No. 1 W. A. Harris, J. Harris Sur. A-502. Fishing 1,440 ft.

F. W. Merrick, Inc., No. 1 Mrs. L. J. Jones, J. Lawson Sur. A-588. Drlg. 2,001 ft.

C. Newburn No. 1 J. J. Clark, W. C. Campbell A-238 Sur. Drlg. 800 ft.

Petterson et al No. 1 J. M. Floyd, Chas. De Morse Sur. A-305. Loc.

Rapp O. & G. Co. No. 1 Mrs. M. J. Little, Blk. 60, Cooke Co. Sch. Ld. Sur. A-205. Loc.

Seitz et al No. 1 State Bank, Charles Wheelock Sur. A-1,131. Loc.

Sinclair Prairie Oil Co. et al No. 2 A. C. McCall, H. White Sur. A-1,134. Drlg. 7,300 ft.

Stuck et al No. 1 Elkins, A. J. Shannon Sur. No. A-837. S.D. 2,372 ft.

Denton County

Carlysle & Wilson No. 1 J. P. Knox, R. Howard Sur. A-542. Drlg. 1,500 ft.

J. C. Foster No. 1 Jeffcoat, J. West Sur. S.D. 1,040 ft.

C. C. Minnick No. 1 C. N. Price, J. Doughtitt Sur. A-1,322. Fsg. 270 ft.

Oil Finance No. 1 J. S. Gambill. Moving in rotary.

J. Stogner No. 1 J. Maxwell, Jno. Morton Sur. A-792. Spudded and S.D.

Grayson County

F. Gailbreath et al No. 1 Singletary, Chas. Quillian Sur. A-989. Lost hole; skid. drk. 70 ft. W and R.U.R.

Olson et al No. 1 D. R. Uitger, P. P. Cady Sur. A-301. Drlg. 1,602 ft.

Pete Shaner No. 1 Blair, R. H. Deavers Sur. A-313. S.D.O. 2,701 ft.

Jack County

Bryson O. & G. Co. No. 1 O. Loving, T.& N.O. Sur. A-852. Drlg. 3,000 ft.

Cato Co., Inc., No. 1 Raley, B. I. Hughson Sur. A-256. Drlg. plug.

Danciger O. & R. Co. No. 1 Kinder, B.S.&F. Sur. A-83. Loc.

Hamilton Pet. Co. No. 1 J. S. Rhodes, Wm. Orr Sur. A-849. Loc.

Hanlon-Buchanan, Inc., No. 1 Calvin, E. B. Calvin Sur. S.D. 2,968 ft.

Hanlon-Buchanan, Inc., No. 1 Galvin, E. B. Galvin Sur. S.D. 2,968 ft.

Sam Shabay No. 1 L. W. Fields, sec. 1, S.P.R.R. Sur. Loc.

Montague County

Clark-Beckner No. 1 C. W. Bell, sec. 6, M.E.P.&P. Sur. Drk.

T. P. Frost No. 1 Johnson, sec. 6, E.T. R.R. Sur. Drlg. 2,100 ft.

W. E. Halbert No. 1 Petty, S. A. Southerland Sur. A-992. S.D.O. 1,680 ft.

L. C. Heydrick No. 1 Cliff Dowd, G. W. Browning Sur. A-1,274. S.D. 3,526 ft

Sinclair Prairie No. 1 Hodges, Blk. 55, K. C.S.L. Sur. Drlg. 1,020 ft.

Throckmorton County

Canyon O. & G. Co. No. 1 Inright, D.B.B. &C. Sur. Spdg.

Gibson & Jennings, Inc., No. 1 Polk, P.C. S.L. Sur. A-239. Loc.

R. J. Williams No. 1 W. B. Parrott, T.E. &L. Sur., sec. 961. Drlg. 2,180 ft.

Wichita County

A. E. Blair No. 1 Cody Est., sec. 311, Waggoner Col. Subd. B.S.S.O. 1,880-95 ft.; tstg.

Box & Seaberry No. 1 Krizan, Blk. 43, Cherokee Sch. Lds. S.D.O. 645 ft.

King Oil Co. No. 1 M. Stone, G.C.&S.F. Sur. A-758. 6⅝-in. cem. 1,610 ft.; W.O.C.

T. B. Medders No. 1 Allen, H.T.&B. Sur. A-129. S.D.O. 1,300 ft.

Palmer et al No. 1 McCarty, S. O. Fowler Sur. No. A-78. Drlg. 1,750 ft.

Geo. Proctor No. 1 Burnett, sec. 1, S.A.& M.G. Sur. S.D.O. 810 ft.

Wilbarger County

King Oil Co. No. 2 Waggoner, P. J. Poitevent Sur. A-531. 6⅝-in. cem. 2,120 ft.; W.O.C.

Rathke Oil Co. No. 1 Waggoner, H.&T.C. Sur., Blk. 33. Drlg. 1,350 ft.

Wise County

Texas-Canadian Dev. Co. No. 1 Levette, sec. 1, S.C.S.L. Sur. Drlg. 1,525 ft.

Young County

R. C. Albright No. 1 W. E. Steele, I.R.R. Sur. A-156. Drk.

Alexander & Long No. 1 Goldston, S.P.R.R. Sur. A-263. Drlg. 1,800 ft.

J. W. Eagleston No. 1 E. O. Wall, sec. 1,920, T.E.&L. Sur. Loc.

Helmerich & Payne No. 1 J. H. Rubenkoenig, J. Poitevent Sur. 9-227. R.U.R.

Nash & Windfohr No. 1 F. B. Lowery, S. H. Criswell Sur. A-1,297. Drlg. 3,300 ft.

Pitzer & West No. 1 Gathright, T.E.&L. Sur. 617. Drlg. 800 ft.

States Oil Corp. No. 1 N. Laquay, A. Erwin Sur. A-1,779. Loc.

A. T. Strong No. 1 Davidson, R. C. Eddleman Sur. A-1,420. S.D.O. 3,650 ft.

R. H. Vise No. 1 Dollins, T.E.&L. Sur. 615. Drlg. 1,250 ft.

C. V. Welch No. 1 Street, M. E. Criswell Sur. A-1,772. Drlg. 300 ft.

L. W. Wickes No. 1 McCluskey, Green Sur. Drlg. 905 ft.

Yorktex Pet. Co. No. 1 F. G. Burnett, G. W. Hills Sur. A-151. Drlg. 4,200 ft.

WEST TEXAS WILDCATS

Andrews County

G. F. Getty, Inc. No. 1 R. H. Lindley, 660 ft. from S and W, sec. 8, Blk. A-46. Drk.

Grisham Hunter Corp. No. 1 Ratliff & Bedford. T.D. 4,268 ft.; to run csg.

Wm. Hannigan No. 1 Logsden, sec. 5, Blk. A-32. Drlg. 2,030 ft.

R. H. Henderson No. 1 J. E. Parker, sec. 25, P.S.L. Sur. A-43. T.D. 4,555 ft.; to set flow valves.

Sinclair Prairie Oil Co. No. 1 E. Cowden, sec. 12, Blk. 44, Twp. 2n, T.&P. Sur. Drlg. 2,122 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd., sec. 66, Blk. 10, G.H.&S.A. Sur. T.D. 3,690 ft.; C.O.

Crane County

Big Basin Oil Co. No. 1 Cowden. S.D. 3,473 ft.

Clark et al No. 1 Jordan, sec. 12, Blk. B-22, P.S.L. Sur. Drlg. 314 ft.

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. T.D. 6,709 ft.; S.D.

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Straightreaming 3,702 ft.

Gulf Oil Corp. No. 2 Snodgrass, sec. 1, Blk. B-25. T.D. 3,148 ft.; to set csg.

Moore Bros. No. 1 Barnsley, sec. 43, Blk. 32, P.S.L. Sur. T.D. 6,262 ft.; ran csg.

Navarro Oil Co. No. 1 Dawson, sec. 2, Blk. R, T.&M.R.R. Sur. Drlg. 537 ft.

Sawyer Drlg. Co. No. 1 McKnight, sec. 16, Blk. B-17, P.S.L. Sur. Loc.

Dawson County

Roy Albaugh et al No. 1 J. Robinson. T.D. 5,038 ft.; pumped 18 bbls. fluid in 6 hrs., 15 bbls. oil and 3 bbls. water.

Ector County

Empire O. & R. Co. No. 1-D Cummins, sec. 23, Blk. 45, Twp. 1n, T.&P. Sur. Drlg. 2,228 ft.

Stanolind O. & G. Co. No. 2-B Cowden. T.D. 4,451 ft.; P.B. 4,303 ft.; C.O.

Edwards County

Plateau Oil Co. No. 1 Hatch. Drlg. 2,851 ft.

Fisher County

L. A. Daniels et al No. 1 J. J. Nickless. T.D. 1,625 ft.; U.R. csg.

Forest Dev. Co. No. 1 A. M. Dry, sec. 108, Blk. 2, H.&T.C. Sur. T.D. 4,537 ft.; testing.

L. A. Long et al No. 1 J. L. Mayberry, sec. 56, Blk. 1, H.&T.B. Sur. Fsg. 3,100 ft.

Southern Oil Co. No. 1 Robinson, sec. 172, Blk. 2, H.&T.C. Sur., 2½ mi. NE of Raton. M.I.M.

Gaines County

Amerada Pet. Corp. No. 1-A Averitt, sec. 228, Blk. G, W.T.R.R. Sur. T.D. 5,029 ft.; flowed 214 B.P.D., 1½ per cent b.s. through 1-inch ck., and 2½-in. tbg. on 12-2-36.

Amerada Pet. Corp. No. 1 Robbins, 660 ft. from N and W, sec. 9, Sur. A-22. Drlg. 600 ft.

Stanolind O. & G. Co. No. 1 Morrow. S.D. 2,765 ft.

Glasscock County

Fleetborn Oil Co. No. 1 Black Arrow, sec. 3, Blk. 34, Twp. 3s, T.&P. Sur. Drlg. 800 ft.

Fleetborn Oil Co. No. 1 Coulson, sec. 19, Blk. 33, Twp. 3s, T.&P. Sur. Drlg. 1,376 ft.

Moore Bros. No. 1 I.T.I.O. and McDowell, sec. 31, Blk. 34, Twp. 5s, T.&P. Sur. R.U. machine; drlg. 1,202 ft.

Hockley County

Texas Co. No. 1 H. Slaughter, Labour 83, League 38, Zavala Co. Sch. Lds. Drlg. 3,300 ft.

Howard County

Johnson No. 2 Hyman, sec. 88, Blk. 29, W.&N.W. Sur. Loc.

Hudspeth County

Haymon Krupp Oil & Ld Co. No. 1 Thaxton, SE¼ sec. 34, Blk. 74, Twp. 6. Drlg. 2,002 ft.

Jeff Davis County

H. D. Wilcox et al No. 1 Jones & Coffield, sec. 121, Blk. 4, H.&T.C. Sur. Drlg. 414 ft.

Jones County

H. D. Egger et al No. 1 O. Roberts, sec. 26, Orphan Asylum Lands. Loc.

K. O. T. Oil Co. No. 1 E. C. Duke, sec. 20, Blk. 15, T.&P. Sur., 1 mi. N of Hawley field. Fsg. 1,910 ft.

Cyster & Griffith No. 1 Bumpass, A. Jones Sur., 3 mi. SW of Truby. Drlg. 1,821 ft.

J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. Drlg. 1,710 ft.

Texas Inland Oil Co. No. 1 J. K. Pittard, sec. 27, Orphan Asylum Lds. Drlg. 1,313 ft.

Tiner et al No. 1 Rainwater, sec. 34, Blk. 2, S.P. Sur. T.D. 2,165 ft.; U.R. csg.

Ungren & Frazier No. 1 Davis & Stemmons, Lot 7, F. M. Smith Sur. No. 3. 2½ mi. SW of Lueders. T.D. 1,505 ft.; fsg.

Ungren & Frazier No. 1 Trothers, Lot 1, Sub. 2, E. C. Miller Sur. Drlg. 565 ft.

Lynn County

Hart et al No. 1 Edwards, SE¼ sec. 29, L.&S.V. Sur. T.D. 5,005 ft.; to deepen.

Nolan County

Dr. Robinson Co. No. 1 E. Gabler, sec. 26, Blk. X, T.&P. Sur. T.D. 840 ft.; set csg.

Pecos County

Bahan & Rhodes No. 1-B Bonebrake, sec. 116, Blk. 8, H.&G.N. Sur. Drlg. 2,068 ft.

C. A. Everts No. 1 W. S. Tyrell, sec. 508, G. Montez & Duran Sur. Drlg. 2,037 ft.

Hightower Oil Corp. No. 1 Holmes, sec. 6, Blk. C-3, E.L.R.R. Sur. T.D. 1,043 ft.; set csg.

Kirk et al No. 1 Potts, sec. 6, Blk. 9, H.& G.N. Sur. T.D. 1,774 ft.; C.O.

E. R. Minshall, No. 1 Banker, sec. 25, Blk. 146, T.&St.L. Sur. Fsg. 2,815 ft.

S. Thompson No. 1 Elsinore Cattle Co., sec. 54, Blk. D, G.C.&S.F. Sur. C.O. 3,891 ft.

Union Oil & Mining Co. No. 2 Potts, sec. 6, Blk. 9, H.G.N. Sur. T.D. 1,488 ft.; ran csg.

Young No. 1 Bailey, sec. 23, Blk. 178, T.C. R.R. Sur. S.D. 1,260 ft.

Presidio County

Lindeman Bros. Oil Corp. No. 1 J. R. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R Co. Sur., 2½ mi. NE of Presidio. S.D. 3,019 ft.

A. H. Main No. 1 Greenlee, sec. 40, Blk. 347, 13 mi. NE of Marfa. Loc.

Reagan County

Bahan & Rhodes No. 1 Kloh, sec. 37, Blk. 37, Twp. 5s, T. & P. Sur., NW cor. of county. R.U. machine.

Schleicher County

Mangus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell grantee. Elev. 2,209 ft.; T.D. 6,527 ft.; P.B. 5,912 ft.; to C.O. and retreat.

Terrell County

Ohio Oil Co. No. 1 M. H. Goode, sec. 26, Blk. 161, G.C.&S.F. Sur., S.D. 7,022 ft.

Terry County

W. L. Pickens et al No. 1 Lewright. S.D. 120 ft.

Uscan Oil Co. No. 1 Brownfield, C N¼ sec. 54, Blk. K, P.S.L. Sur. Drlg. 4,912 ft.; el. 3,413 ft.

Tom Green County

Webb Bros. No. 1 J. F. Schrivener, Krending Sur. 1,663, 3 mi. N and E of Van Court. S.D. 664 ft.

Upton County

R. H. Henderson No. 1 Reese, sec. 16, Blk. 3½, C.C.S.D.&R.G.N.G. Sur. Drlg. 1,315 ft.

Moore Bros. No. 1 Giddings, Sub. 25, Throckmorton Co. Sch. Lds. T.D. 2,348 ft.; ran csg.

J. H. Myles & Son No. 1 Hughes, sec. 91, Blk. Y, G.C.&S.F. Sur. S.D. 125 ft.

Dan Short No. 1 Webb, sec. 174, Blk. E, C.C.S.D.&R.G.N.G. Sur. S.D. 750 ft.

Ward County

Findley & Cherry No. 1 Sealey, sec. 54, Blk. F, G.M.M.B.&A. Sur. Drlg. 2,981 ft.

Prince Bros. Drlg. Co. No. 1 Monroe, sec. 52, Blk. 34, H.&T.C. Sur. Fsg. 2,846 ft.

Winkler County

Adams & Bradley No. 1 Edwards, 2,310 ft. S and 330 ft. E, sec. 6, Blk. C-23, M.I.M. Read & Duffey No. 1 Sealey, sec. 8, Blk. A, G.M.M.B.&A. Sur. S.D. 4,012 ft.

Richardson Oils, Inc., No. 1 Humble-Walton, sec. 3, Blk. B-3, P.S.L. Sur. R.U.S.T.

Yoakum County

Texas Pacific Coal & Oil Co. No. 1 Bennett, sec. 678, John H. Gibson Sur. Drlg. 3,569 ft.

RANGER (WEST CENTRAL TEXAS) DISTRICT

Brown County

Brown & Gardner No. 1 Triplett, 1 mi. SW of Cross Cut, W. B. Travis Sur., sec. 148. Fsg. tools 1,349 ft.

Callahan County

H. V. House et al No. 1 R. Smart "B," 5 mi. SW of Admiral, W. T. Lassiter Sur. Spd. and S.D.

Hal Hughes No. 2 Williams, 7 mi. NE Baird, C SE¼ SE sec. 61, B.O.A. Sur. Moving in for 2,500-ft. test.

Coleman County

Midfield Oil Co. No. 1 T. H. Ward, sec. 274, W. Echels Sur. T.D. 1,000 ft.; set 10-in. csg.

Comanche County

H. L. Baughman No. 1 Hardin, Isa Hoxey Sur. S.D. 800 ft.

Eastland County

Ashburn and Luke No. 1 Scott, A. Tarter Sur. T.D. 3,118 ft.; shot with 100 qts.; C.O.

F. J. Estes No. 1 Gentry, A. Popejoy Sur. S.D. 2,350 ft.

Hamilton County

Seaboard Oil Co. No. 1 fee, A. C. Grimes Sur., 10 mi. N of Hamilton. Drlg. 2,405 ft.

Shackelford County

H. C. Akins et al No. 1 J. E. Swenson, C E½ sec. 14, A.B.&M. Sur. Loc.

Albany Oil and Freeman No. 1 W. Hastings, 5 mi. NW Morris-Buie pool, sec. 18, D.&S.E.R.R. Sur. Drlg. 1,415 ft.

Charter Oil Co. No. 1 W. D. Baker, CWI, of county, 1,219 ft. from N line, 1,588 ft. from W line, sec. 217, E.T.R.R. Sur. Drlg. 1,500 ft.

Jones & Stasney et al No. 1 Dawson & Conway, 2 mi. N Morris-Buie pool, C SW SE¼ sec. 195, E.T.R.R. Sur. Loc.

C. Morton et al No. 1 G. R. Davis, C SE NE sec. 55, Blk. 13, T.&P. Sur., 17 mi. SW of Albany. S.D. 1,800 ft.

Roberts, Calhoun & Boynton No. 1 W. H. Green, 12 mi. SW of Albany, sec. 65, T. &P. Sur., Blk. 12. Loc.

Stephens County

C. B. Christie et al No. 1 E. S. Maury, 4 mi. W of Crystal Falls, J. Koehler Sur., Abst. 26. Drlg. 125 ft.

W. T. Garret et al No. 1 Echols, 6 mi. SE of Ivan, W½, sec. 10, Blk. 3, S.P.R. R. Sur. Drlg. 410 ft.

Mudge Oil Co. No. 1 W. P. Smith, 2 mi. NW of Ivan, sec. 14, S.P.R.R. Sur., Blk. 2. Straightening crooked hole; T.D. 275 ft.

Tarrant County

E. E. Hoffpauir et al No. 2 W. H. Davis, 2 mi. S Arlington, H. Blackwell Sur., Pat. 3-1,197. Spd. and S.D.

Throckmorton County

R. J. Williams et al No. 1 W. B. Parrott, 4 mi. NW of Woodson, sec. 961, T.E.&L. Sur. Drlg. 2,160 ft.

Wise County

Texas-Canadian Dev. Co. No. 1 Leverett, 990 ft. from E and 330 ft. from S of Blk. 19, Smith Co. Sch. Lds. Sur., 5 mi. NE of Rhome, 3,500-ft. test. Drlg. 1,608 ft.

Canadian Fields

(Continued from Page 90)

1,560 feet with 37,000 feet a day, and may be shot.

In Norfolk County, Domestic Natural Gas Syndicate No. 4, Lot 12, Concession 1, Woodhouse Township, 300 feet south of the Plank Road and 50 feet east of the Port Dover town limits, finished in the White Medina at 1,110 feet with 110,000 feet a day. Domestic No. 5 is below 1,025 feet with 35,000 feet a day and is deepening.

In Walpole Township, Haldimand County, a local syndicate finished a test on the Mahlon Wilkins farm, Lot 21, Concession 5, with a flow of 900,000 feet a day and 460 pounds rock pressure. It is one of the largest wells yet drilled in the Haldimand fields.

Central West Fields

(Continued from Page 88)

ship, Athens County, for No. 17, and in section 6, Ames Township, Choguill & Co. is spudding on the George Linscott property.

KENTUCKY FIELDS

Eleven completions were reported in the Kentucky fields this past week, nine oil producers with a total new production of 207 bbls. and two dry holes. In the Livermore pool, in McLean County, Kentucky Producing Co. completed No. 1 on the Hicks townlot as a 70-bbl. producer. On the E. Price property, Engles and Kentucky Producing Co. completed a 15-bbl. well. Snyder & Clark No. 1 Scheffer lot had an initial production of 25 bbls. after a shot. On the A. M. and M. D. Hatckett property, W. E. Hupp & Co. No. 3 had a production of 10 bbls. the first 24 hours after a shot. The Petroleum Co. No. 1, on the Collins and Atherton lots, has been abandoned as a dry hole.

In Henderson County, near Niagara, Ranger Oil Co. and others completed No. 12 on the C. M. Gish property as a 16-bbl. producer.

The Ohio Oil Co. completed three wells on the G. B. McManama farm No. 2. No. 11 had a production of 10 bbls., No. 13 had a production of 16 bbls. and No. 14 had an initial production of 10 bbls. after a shot. These producers are located near Grindstone hill, in Ohio County.

ILLINOIS FIELD

The Pure Oil Co. No. 1 George Bradley, in section 26-1n-7e, Wayne County, Illinois, was drilling at 1,150 feet in slate, and the same company's No. 1 Eugene E. Weiler, in section 33-3n-8e, Clay County, both in Illinois, was drilling at 200 feet in shale. These are the first tests for deep pay sands in the Central Coal Basin.

THE UNIVERSITY OF

PERSONAL

J. E. JOHNSON, manager of the automotive department, Tide Water Oil Company, Tulsa has been nominated for president of the Petroleum Motor Transport Association to succeed H. D. PATRIDGE, Indian Territory Illuminating Oil Company. The election will be held December 18. Mr. Johnson is first vice president and previously was second vice president of the association. He has been associated with the Tide Water company for 12 years, and previously was with the Gypsy Oil Company. Other nominees are: CHARLES H. RUDY, Ohio Oil Company, first vice president; H. L. ARMSTRONG, Skelly Oil Company, second vice president; and LEON E. SCHROEDER, Mid-Continent Petroleum Corporation, for reelection as secretary-treasurer. Nomination is tantamount to election.

P. W. ANDERSON, geologist, Wichita, Kans., has returned from New York, where he attended a meeting of the directors of the Vaccars Corporation. He was a recent business visitor in Tulsa.

GEORGE W. McLEAN, JR., representative of the Fairbanks Company in the Mid-Continent area, has gone east to attend an annual personnel meeting at New York and the power show at Atlantic City.

DR. RICHARD J. RUSSELL, professor of geology in Louisiana State University, will deliver a paper on "Some Notes on the Geo-Synclinal Theory" before the Shreveport, La., Geological Society Friday, December 18.

F. E. MARSHALL is new district geologist in Kansas for Snowden & McSweeney Company, one of the pioneer operating firms in the Fairport pool, Russell County, Kansas. Mr. Marshall has been with the Signal Oil Company for the last three years.

D. L. PERKINS, consulting geologist of Shreveport, La., and regarded as one of the discoverers of Rodessa field, is rapidly recovering from gun wounds and other injuries received from a negro assailant several months ago.

STANLEY WHITE, Ohio Oil Company geologist, recently left Tulsa to go on a field trip with the Ardmore Geological Society in North Texas, but when the trip was postponed until December 11 the Tulsan continued to Mineral Wells, Tex., on a solo field trip.

PAUL WEAVER, geologist with Gulf Oil Corporation, Houston, Tex., delivered a paper on "Problems in Connection with Heaving Shale Encountered in Drilling on Salt Domes in the Gulf Coast District" before the Shreveport, La., Geological Society Friday, December 4.

OSCAR HATCHER was reelected chairman of the Ada, Okla., chapter of the American Petroleum Institute at the recent annual meeting. He reappointed IRA KING, of the E. H. Moore Company, secretary and treasurer. DICK MARCHAND, of Central Lumber Company, was elected first vice president, and RUSSELL SMITH, superintendent of Mabee Consolidated Corporation, was elected second vice president.

MELVIN M. GARRETT, consulting geologist of Wichita Falls, Tex., has opened an office in Dallas, Tex.

A. G. BAALIM, director of Sunshine Oils, Ltd., has returned to Lethbridge, Alberta, from a business trip to Calgary, Alberta.

M. K. DOYLE of the Doyle Diamond Drilling Company of Colorado Springs, Colo., visited Calgary, Alberta, recently.

GORDON SCHUHMACHER of the Reda Pump Company has been transferred from Bartlesville, Okla., to Oklahoma City, Okla.

J. S. DEWAR, president of the Dewar Oil Company of Bartlesville, Okla., has returned from a short hunting trip in Arkansas.

R. J. McBRIDE has resigned from the Texas Company at Houston, Tex., to take a position as engineer for the Happy Belting Company at Tulsa.

ROBERT QUINLAN, formerly of the Original Acid Service, of Alma, Mich., has opened a new acidizing service in Mount Pleasant, Mich.

G. E. DOUBLEDAY of Vancouver, British Columbia, has been elected a director of Highwood-Sarcee Oils, Ltd., of Calgary, Alberta, in succession to the late W. A. DINGMAN.

ARTHUR T. BEAZLEY, general manager of the Anglo-Ecuadorian Oilfields, Ltd., of La Libertad, arrived in New York December 1 aboard the Grace liner Santa Clara.

GEORGE W. HOLLAND, director of the Petroleum Conservation Division of the Department of the Interior, Washington, D. C., was a visitor at the Kilgore, Tex., offices of the Federal Tender Board and Federal Petroleum Agency this week.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The Oil and Gas Journal moves its publication offices and plant from St. Louis back to Tulsa.

In the re-organization of the Oklahoma Pipe Line Company Allan T. Towl was elected president; J. A. Moffatt, vice president; H. L. Havis, secretary and treasurer and E. H. Leroux a member of the board of directors.

John Bahan of Bradford, Pa., a National Transit superintendent has been made vice president and general superintendent of the Cumberland Pipe Line Company.

J. C. Donnell is elected president of the Ohio Oil Company succeeding John D. Archbold, and James W. Kerr vice president, succeeding Mr. Donnell.

20 YEARS AGO

Captain J. T. Jones, 74, outstanding figure in the successful development of the Eastern oil fields and later successful as a railroad builder and lumberman dies in Buffalo, N. Y.

W. S. Farish of Houston, Tex., president of the Gulf Coast Oil Producers Association, believes the price of Gulf Coast oil is due for a rise and urges producers not to be in a hurry to sign contracts for 1917.

10 YEARS AGO

E. W. Clark, executive vice president of the Union Oil Company, California, is chosen president of the American Petroleum Institute.

Wallace E. Pratt, Humble Oil & Refining Company, estimates that the Gulf Coast region may have a petroleum reserve of six billion barrels.

J. E. Crosbie, Tulsa oil producer and banker, entertains 300 oil men at a banquet in Tulsa following the A.P.I. annual meeting.

J. P. EVANS, Shreveport, La., independent operator in North Louisiana, has been in New Orleans, La., attending to business matters during the last week.

FREDERICK S. FALES, vice president of Socony-Vacuum Oil Company, Inc., headed the petroleum division of the annual New York drive in behalf of the United Hospital Campaign Committee.

GEORGE S. WALDEN, chairman; P. W. PARKER, president, and H. DUNDAS, vice president of Standard-Vacuum Oil Company, are abroad visiting in England and other European countries.

NELSON and WINTHROP ROCKEFELLER, sons of JOHN D. ROCKEFELLER, JR., were the guests of E. R. BROWN, chairman of the board, Magnolia Petroleum Company in Dallas, Tex., in the past week.

DR. R. E. WILSON, vice chairman of Pan American Petroleum & Transport Company, reviewed the future of invention recently in New York when the centennial of the founding of the American patent system was celebrated.

JOHN FOWLSTON of Amarillo, Tex., has resigned his position as general superintendent of the North American Oil & Gas Company and the Northern Natural Gas Company, and has gone with the Tri-County Gas Company at Scott City Kans. Mr. Fowlston has been identified with the gas development in the Amarillo district since 1926 when he went there with the Shell Petroleum Corporation as gas engineer. He went with the North American and the Northern Natural, affiliated companies, in 1930 when these companies completed their gas lines to the northern and eastern markets, as gas engineer.

PARAGRAPHS

R. C. QUIETT, geologist and oil operator of Shawnee, Okla., returned last week from Gaines County, Texas, where he had been watching operations at the new discovery wells in that sector, and came on to Tulsa on business.

MR. and MRS. BILL WENDER of Tyler, Tex., are spending their honeymoon in Cuba following their marriage on November 9 at Cisco, Tex., the home of Mrs. Wender, who before her marriage was MISS MARY FEE, formerly in the land department of the Phillips Petroleum Company.

A. C. WRIGHT, formerly district geologist for Shell Petroleum Company, Shreveport, La., has been transferred to the Tyler, Tex., office in the same capacity. H. R. KAMB, formerly Mr. Wright's assistant, has been appointed district geologist in the Louisiana-Arkansas office in Shreveport.

LON TURK, consulting geologist, who recently has completed a survey of the Oklahoma City field, discussed that area in a lecture at a special technical meeting of the Oklahoma City Geological Society recently. He used slides and maps to illustrate the lecture, which was open to visiting oil men attending the Independent Petroleum Association meeting.

FRANK S. PARKER, geologist, of Los Angeles, Calif., is making an investigation and report on Alberta oil prospects for Los Angeles interests.

R. T. HAND, who joined The Texas Company 11 years ago as district manager at San Jose, Calif., has been appointed superintendent of sales for the metropolitan Los Angeles, Calif., district, which includes a number of suburban communities.

DR. W. G. CARPENTER, principal of the Institute of Art and Technology at Calgary, Alberta, recently addressed the Chauffeurs and Teamsters Association of Calgary on the history of gasoline and the internal combustion engine.

RICHARD WERNER of Fort Worth, Tex., mechanical engineer, born and educated in Germany, addressed members of the Fort Worth Geological Society in that city on the evening of December 3. He has just returned from Germany and spoke on "Germany of Today."

GORDON CAMPBELL, of General Petroleum Corporation, discussed natural gas and gasoline accounting at the last monthly meeting of the California Natural Gasoline Association, which was held in conjunction with the Los Angeles Petroleum Accountants Society.

B. B. BOOTH, Humble Oil & Refining Company; CHARLES GEORGE, Texas Company; LONNIE HUDDLESTON, Shell Petroleum Corporation; G. A. PLUMMER, Lone Star Gas Company; BILLY MALONEY, Gulf Oil Corporation; JOHN MOUSER and BILL PHELPS, Sinclair Prairie Oil Company, oil scouts who hold weekly check meetings at Abilene, Tex., were guests of the Abilene Chamber of Commerce at a luncheon on December 3.

C. M. RADER, formerly divisional engineer of the central marketing division of Phillips Petroleum Company, now is special sales engineer for Smith Separator Company in Tulsa.

DONUIL HILLIS of Chanslor Canfield Midway Oil Company and WALTER IRELAND of Standard Oil Company were the principal speakers at the November meeting of the Taft chapter of the California Natural Gasoline Association held in the Fox Hotel at Taft, Calif.

RALPH V. ROSBOROUGH, northern division superintendent, L. WILSON and FRED KIMBALL of Union Oil Company's San Luis Obispo terminal, are receiving congratulations from other members of the company due to their prompt response to an emergency call for assistance following the wreck of a passenger bus. Mr. Wilson, with the assistance of Mr. Kimball, opened a hole in the top of the bus with a blow torch and extricated the passengers, several of whom subsequently died as a result of injuries sustained.

J. M. DE LA GARZA CARDENAS, formerly chief inspector for the Mexican government's petroleum department, now employed by Dowell S.A., the Mexican subsidiary of the Dowell Chemical Company of Midland, Mich., is a visitor in the Mid-Continent area. Dowell S.A. operates in Mexico in a capacity similar to that of Dowell Incorporated in the United States. Mr. de la Garza Cardenas, who is a graduate in petroleum engineering from the University of California, has been associated with the petroleum department of the Mexican government for the past seven years.

W. R. FINNEY, president of the Oklahoma Pipe Line Company, has returned to Tulsa after a vacation in California.

Those Peons Had Sense

There was a time back in 1920 when Richard T. Lyons, who this week became manager of the land and geological departments of the Tide Water Associated Oil Company, couldn't have got much for his chance of becoming manager of anything. With 20 Venezuelan peons as a bodyguard, he was pushing through peril-infested jungles along the eastern foothills of the Andes trying to find the headwaters of a river in order to locate the boundaries of a concession owned by the Maracaibo Oil Exploration Corporation. Snakes, savage beasts and clouds of mosquitoes beset the party. And there were fierce Motilone Indians, expert with bow and arrow, who liked to use white intruders as targets for archery practice. No hits were scored in Mr. Lyons's party but the peons refused to go another step through the tangled thickets and fever-ridden swamps. They viewed with particular distaste the Motilones' habit of notching their arrows so that a victim could not pull one from his body. So the whole party was forced to turn back.

RICHARD T. LYONS

Mr. Lyons resigned as vice president and director in charge of land and geology of the Skelly Oil Company to accept his new post. His headquarters will be in Houston, Tex. Following graduation from the Massachusetts Institute of Technology as a mining engineer, Mr. Lyons's first oilfield experience was in the Ranger and Burkburnett areas. Cromwell and Smackover followed. He joined Skelly in 1924 as geologist.

H. R. MOORE, formerly district treater for Phillips Petroleum Company at Seminole, Okla., has been transferred to Oklahoma City, Okla.

J. D. MACARTHUR, of the Edmonton, Alberta, office of North Star Oils, Ltd., has been named managing director of the company's western division at Calgary.

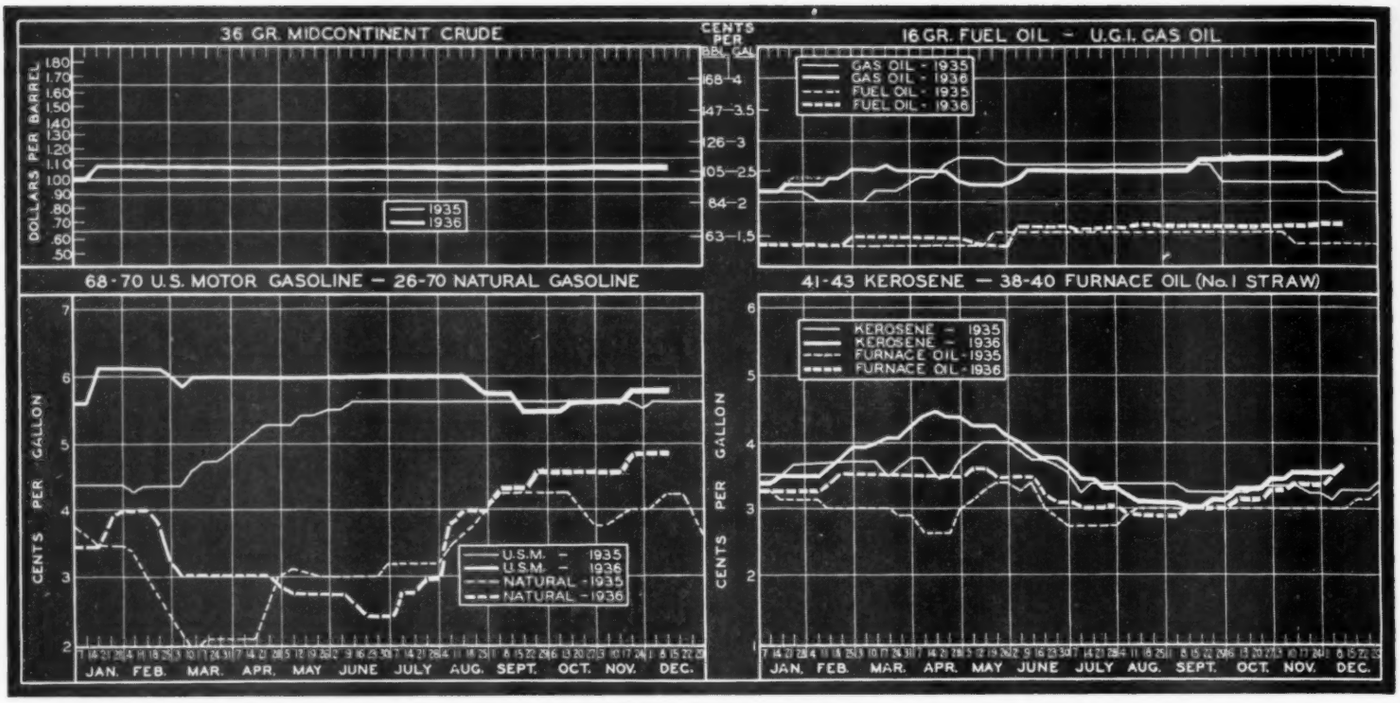
EDMOND BILLINGS, vice president of the Cabot Carbon Company, Boston, Mass., is in Texas on a business trip. His company has holdings and carbon black plants in the Panhandle of Texas.

HAROLD S. KELLY, who was formerly assistant district superintendent at Smackover, Ark., for Phillips Petroleum Company, has been transferred to Oklahoma City, Okla., where his position will be the same.

REED O'NEIL of the Reed Roller Bit Company has been appointed California district manager succeeding J. V. PENNINGTON, who recently left for Houston, Tex., where he will become a member of the home office.

M. J. PILKINGTON has been appointed agent for General Petroleum Corporation at Flagstaff, Ariz., and in his new capacity will be under the supervision of C. A. BOYNTON, who maintains headquarters at Phoenix, Ariz.

CHARLES B. CARPENTER, petroleum engineer for the Bureau of Mines at Dallas, Tex., was elected president of the Dallas Petroleum Geologists for the next year. DILWORTH S. HAGER, consulting geologist and producer, was elected vice president, and R. A. STEHR, of the Seaboard Oil Corporation, was named secretary-treasurer. Mr. Carpenter was vice president of the organization the past year.



Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Uncertainties Injected Into Group 3 Market by Crude Price Advances

By T. F. SMILEY

New elements of uncertainty were injected into the Group 3 refinery markets by the announcement of four crude purchasing companies that they would advance their prices early in January. Some viewed the further stiffening of the heating oils as ascribable to this action, though it was agreed the mounting demand for them probably would have effected much the same result by itself.

The effect on the motor fuels was even less clear. A few years ago such an announcement by crude purchasers would have been followed almost immediately by a quarter- or half-cent advance in tankcar quotations for gasoline. But jobbers nowadays keep themselves informed concerning country-wide conditions and they refuse to do any extensive leaping before they look. There was no observable disposition on their part early this week to start bidding up gasoline in an effort to fill their storage before the higher prices for crude become effective.

AWAITING DEVELOPMENTS

There prevailed in the trade, however, a feeling that within a relatively short time refinery prices for gasoline would have to go up if the action initiated by the Continental Oil Co. is followed by other major buyers. A disposition to await developments seemed general.

Adding to the difficulty of mapping out the probable performance of the gasoline market is the fact that the crude raise comes at a time of the year when motor fuel consumption is nearing its lowest point. Further confusing the gasoline outlook is the increasingly insistent demand for heating oils, to satisfy which the refiner is compelled to make gasoline for which there may be little or no demand.

An advance of .3 cent in tank-wagon prices for gasoline throughout its territory announced Monday of this week by the Standard Oil Co. (Indiana) was interpreted as indicating that company's intention to adjust its prices on petroleum products to the higher cost of crude.

Third-grade gasoline shipped from Michigan into Chicago territory was reported to be exerting a softening effect on that particular class of material, but in no part of Group 3's consuming area did there seem to be any weakening of the higher-octane goods. On the contrary, a better tone was said to prevail. East Texas gasoline continued to be moved to the Gulf Coast, and so long as it goes in that direction, instead of northward, in competition with the output from Oklahoma refineries, a steady market is foreseen by many observers, regardless of conditions arising from crude prices or from the urgent demand for heating oils.

The cry for heating oils was growing louder this week, as freezing temperatures fell over the whole northern tier of states where the oil burner is standard equipment in home-heating. Many large suppliers were advancing prices on industrial fuels, which have moved into a strong position.

FURNACE OIL STOCKS LOW

The urgent call for furnace oils is finding many refiners with their stocks depleted, and belief grows that before warm weather returns again the refining industry will be subjected to more importunate demands than it was last year. Some who formerly made it a practice to concentrate on building up stocks of burning oils during the summer turned to special tractor distillates instead in 1936, and there was such a demand for these that they stored less than half as much furnace oil as usual. Retail prices are being raised in some areas. Kerosene is sharing the vigorous market for the heating oils, with prices advancing.

U.G.I. gas oil, which has been in limited supply for months, was increasingly scarce in the past week, with prices higher. Much is being used for cracking stock, and the demands for gas manufacture are heavier.

Natural gasoline demand continued to be about in line with the supply, and the market was steady at unchanged prices.

The lubricant group displayed no promise of ability to crawl out of the low price range to which it was dragged two months ago by underselling. Wax was steady, with prices unchanged.

Refined Oil Market Barometer

All divisions of market displaying strength. Likelihood increases that there will be a more marked shortage of burning oils than last year. Trade is studying the probable effects of announced advance in crude prices, and though ultimate outcome is not clear, feeling prevails that immediate results will be to stiffen prices for refined products.

MID-CONTINENT. Burning oils vigorous. Gasoline firm. Gas oil strong.

EAST COAST. Fuel oils and kerosene strong. Export lubricating stocks up.

GULF COAST. Gasoline weak. Kerosene and burning oils up. Lubes easier.

CALIFORNIA. Heating oils firmer. Natural gasoline steady.

PENNSYLVANIA. High-octane gasoline strong. Kerosene and lubes firmer.

CHICAGO. Furnace and fuel oils firmer. Kerosene strong.

Vigorous Demand for Kerosene Stirs Talk of Higher East Coast Prices

By H. STANLEY NORMAN

NEW YORK, Dec. 8.—Exceedingly brisk demand for kerosene coupled with higher tanker rates prevailing between the Gulf Coast and Atlantic terminals developed active talk last week of a general price advance. Lubricating stock for export also has advanced slightly during the past few days and available material is being quoted only for near future delivery. Fuel oils are also benefiting from increased demand and an advance in spot quotations is anticipated by market observers. However, tanker charter rates are also playing a part in the current upward trend. Forty-one cents per barrel was obtained by one tanker owner last week for immediate movement of a cargo of kerosene from the Gulf Coast to an Atlantic port. Gasoline cargo rates have also felt the upward trend and a boat was chartered last week at 38 cents per barrel.

Efforts of North Atlantic dealers to secure quotations on a delivered basis have been unsuccessful in Gulf Coast areas. Refiners in that district are maintaining their market firm despite the pressure exerted by customers on the delivery end who are appealing for lower prices to partially offset the advancing tanker rates.

Two companies in the New York district, Sinclair Refining Co. and Hartol Refining Co., are quoting five cents per gallon for kerosene at refinery. Other major marketers are reported giving strong consideration to meeting the advance from 4½ cents, but it had not actually developed at the close of last week.

Although temperatures have moderated somewhat from their lows of last week, which broke all records for the past 30 years, the spot demand for kerosene and light fuel oils is reported in advance of anticipation. Considerable of the current fuel oil and kerosene movement is against contracts on refiners' books since last summer, but there is also sufficient spot business to point prices definitely upward. In view of the call for fuel during the temperature dips last week, fuel oil suppliers feel that the summer and fall predictions of record heating demand based on oil burner statistics probably were understated.

In view of the high tanker rates prevailing for Gulf to Atlantic ports, Pennsylvania refiners are attempting to recover some of the kerosene business lost when this material became available for water delivery. While there is an increasing volume of kerosene moving from the Pennsylvania refining district to Atlantic Coast ports, the big bulk of that business remains in hands of Gulf Coast plants. It is generally believed, however, that tankcar prices in the New York district must be advanced shortly to compensate jobbers for their higher laid-down cost. So far Gulf Coast refiners have held their ground and give indication that their position will be to lift the tankcar and tank-wagon structure rather than to save the difference in tanker rates on the loading end of the chain.

Advanced prices for export lubricating stocks are firm with a limited supply of material available. Dealers and refiners are quoting only for near-future delivery and are unwilling to book any business for periods extending more than 30 days. Cylinder stocks, bright stocks and neutral oils are sharing the better prevailing prices. Steam refined cylinder oil of 630 flash is currently quoted to the export trade at 24½ cents while No. 8 color bright stock is posted at 29½ cents by a majority of refiners in position to supply the material.

Domestic prices for bright stock are lower as are other types of lube oils, but general advances on neutral would not be unexpected.

HEAVY FUEL OILS

Heavy fuel oils, while a little less active than the lighter furnace grades, are nevertheless firm and moving satisfactorily. The demand for this type of material probably will move ahead when consistently low temperatures force heavier firing in large buildings and industrial plants. Restrictions on shipping movement has just about offset the increase felt so far for heavy fuels in industrial plants and for heating purposes. Despite the only partial success of the seamen's strike on the Atlantic Coast, the complete halt of traffic to Pacific ports and the delays on this side of the country have cut into the Bunker C consumption.

There is no weakening tendency apparent in the Bunker C market at $1.15 per barrel in Atlantic waters, but the curtailed consumption has probably delayed an advance which was freely discussed in all quarters just before the strike was launched. Diesel engine oil at $1.65 per barrel is also on firm ground although seasonal restrictions have reduced movement to some exent. There was practically no change during the week in the gasoline market. A majority of the 65 octane business is being done on a basis of 6½ cents per gallon at refineries, although a little trading continues at an eighth to a quarter of a cent below the weighed average. A majority of the major companies post 6¾ cents per gallon in tankcars at refineries but the spot trading is largely confined to other sources.

The retail structure showed no change in New York and vicinity. The sub-normal prices continue in Boston and other New England districts with disturbances also unsolved along the New Jersey coast and in Brooklyn, N. Y.

Consumption slumped somewhat for half the week when sub-freezing temperatures prevailed, but business was back to its seasonal level at the close of the week. Early winter consumption is maintaining the average 1936 increase. Less trouble with below-market material originating on the Gulf Coast and other districts accessible to shipping ports is anticipated in view of the tanker charter rate trend. Existing rates of 38 to 40 cents per barrel preclude any vicious reductions from current quotations.

The commercial consumer policy of Standard Oil Co. of New Jersey in parts of Pennsylvania and New Jersey continues to be discussed. Dealers are not in position to compete for much of this business in view of the slight margin fixed between commercial consumer quotations and tank car prices. Socony-Vacuum's commercial consumer discount policy has been fixed and dealers in that company's territory are slightly better off than in the Jersey ground. However, dealers are pinched considerably by narrow margins and are unable to compete for much of the business in that field.

Kerosene tank-wagon prices at Atlantic City, N. J., were lowered a cent to eight cents per gallon by Standard Oil Co. of New Jersey on November 26 to meet a local condition developing from excessive stocks in nearby Pennsylvania refineries.

The Standard of New Jersey also discontinued posting service station prices in November at all Norfolk, Va., stations which have been placed in hands of dealers.

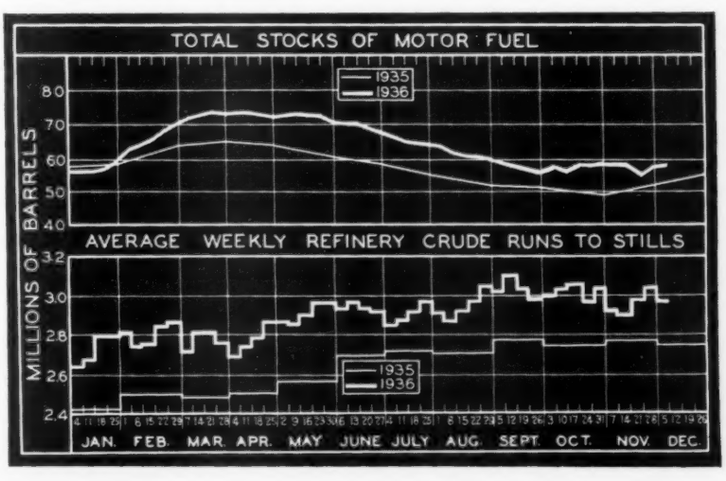
There was no change last week in the wax market, either for export or domestic consumption. Prices are unchanged and the movement of material is at a low ebb in most areas. There was a little more activity reported in wax trading in Pennsylvania, but the New York market was described as "dull." Suppliers, however, are unwilling to quote lower prices.

A. P. I. Weekly Refinery Statistics

Week Ending December 5, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	554,000	14,485,000	11,463,000
Appalachian	94.8	103,000	2,210,000	657,000
Indiana, Illinois, Kentucky	96.2	409,000	8,419,000	5,962,000
Oklahoma, Kansas, Missouri	84.8	254,000	5,601,000	3,419,000
Inland Texas	48.5	106,000	1,736,000	1,769,000
Texas Gulf	97.0	637,000	7,314,000	7,886,000
Louisiana Gulf	96.4	134,000	1,455,000	1,906,000
North Louisiana and Arkansas	90.0	49,000	283,000	544,000
Rocky Mountains	61.9	39,000	886,000	769,000
California	92.5	484,000	11,789,000	73,650,000
Total reported	89.9	2,769,000	54,178,000	108,025,000
Estimated unreported		221,000	3,518,000	2,262,000
*Estimated total		2,990,000	57,696,000	110,287,000
*Estimated total previous week		3,020,000	57,373,000	112,012,000
†December 31, 1935		2,741,000	56,693,000	103,984,000

*Bureau of Mines basis, currently estimated. †Monthly report, U. S. Bureau of Mines.



RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of December 8, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month, or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Gasoline Dlr.	Inc. tax	Kero. tank-wag.
Chicago, Ill.	15.4	13.4	4.0	9.5
Decatur	15.4	13.9	4.0	9.5
Joliet	14.5	13.9	4.0	9.5
Peoria	15.4	13.9	4.0	9.5
Quincy	15.2	13.7	4.0	9.3
Davenport, Ia.	15.4	13.9	4.0	9.5
Des Moines	15.2	13.7	4.0	9.3
Mason City	15.6	14.1	4.0	9.7
Sioux City	15.4	13.9	4.0	9.5
Duluth, Minn.	16.2	14.7	4.0	10.3
Mankato	15.8	14.3	4.0	9.9
Twin Cities	15.8	14.3	4.0	9.9
La Crosse, Wis.	16.8	15.3	5.0	9.9
Green Bay	17.1	15.6	5.0	10.2
Milwaukee	16.7	15.2	5.0	9.8
Detroit, Mich.	14 5	13.0	4 0	8.8
Grand Rapids	15.4	13.9	4.0	9.3
Saginaw	15.6	14.1	4.0	10.1
Evansville, Ind.	16.9	15.4	5 0	†10.0
Indianapolis	17.1	15.6	5.0	†9.0
South Bend	17 3	15.8	5 0	†9.0
Fargo, N. Dak.	16.8	15.3	4.0	10.9
Minot	18.0	16.5	4.0	12 1
Huron, S. Dak.	17.3	15.8	5.0	10.4
Kans. City, Mo.*	14.8	13.3	4.0	8.9
St. Louis*	15.1	13 6	4.0	8 9
St. Joseph*	14.8	13 3	4.0	8.9
Wichita, Kans.	14.3	11.5	4.0	8 0

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax.

(Exclusive of state general sales taxes, except Indiana and South Dakota.)

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective Dec. 7, 1936, f.o.b. Chicago tank-wagon prices: Range oil, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.3 cents. Stanolex No. 1, 1-99 gallons, 8.8 cents; 100-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex furnace oil, 1-149 gallons, 7.8 cents; 150 gallons and over, 7.0 cents. Stanolex A, 1-399 gallons, 5.75 cents; 400 gallons and over, 4.75 cents. Stanolex B, 1-799 gallons, 5.75 cents; 800 gallons and over, 4.75 cents.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Atl'tic City, N.J.	12.5	....	4.0	8.0
Newark	12.5	....	4.0	7.5
Annapolis, Md.	14.6	....	5.0	10.0
Baltimore	14.0	....	5 0	8.0
Cumberland	16.6	....	5.0	10.0
Wash'g'n, D.C.	12 0	15.5	3.8	9.0
Danville, Va.	17.2	20.7	6.0	12.9
Norfolk	16.0	..	6.0	11.3
Petersburg	16 3	19.8	6.0	11.7
Richmond	16.3	19.8	6.0	11.7
Roanoke	17.5	....	6.0	12 9
Charles'n, W.Va.	15.8	....	5.0	12.6
Parkersburg	15.1	....	5.0	11.2
Wheeling	15 0	....	5.0	12.2
Charlotte, N. C.	18.4	....	7.0	12.6
Hickory	18.9	....	7 0	13.0
Mt. Airy	18.7	....	7.0	12.8
Raleigh	18.0	....	7.0	12 1
Salisbury	18.5	....	7.0	12.7
Charleston, S. C.	17.0	20.5	7 0	11.1
Columbia	18.0	21.5	7.0	12.1
Spartansburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail price.

Price basis to commercial consumers, effective Nov. 2, 1936: On deliveries of 500 gallons or more by hose connection, consumer tankcar price plus .5 cent; less than 500 gallons, plus .75 cent, not taking deliveries by hose connection, plus 1 cent. Above schedule does not apply to North and South Carolina, and the greater portions of Virginia and West Virginia where the following is in effect: Up to 35,999 gallons per year, 2.5 cents over tankcar price; 36,000 to 119,999 gallons, 2.0 cents; 120,000 to 239,999 gallons, 1.5 cents; 240,000 to 479,999 gallons, 1.0 cent; over 480,000 gallons, .5 cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.6
Augusta	19.5	....	7 0	*12.5
Macon	20.0	22.0	7.0	*14.0
Savannah	18.5	20.5	7.0	*12 5
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	19.0	21.0	9.0	11.0
Montgomery	20 5	21.0	9.0	14.0
Jackson, Miss.	20.0	22.0	7.0	*12.5
Vicksburg	19.5	....	7.0	12.5
Jacksonville, Fla.	18 0	20.0	8.0	11.5
Miami	19.5	21.5	8.0	12.5
Pensacola	21.5	23.5	9.0	10.5
Tampa	18.5	20.5	8.0	11.5
Lexington, Ky.	18.0	20.0	6 0	11.0
Covington	17.5	19.5	6 0	10.5
Louisville	18.0	20.0	6.0	10.0
Paducah	16.5	....	6.0	8.0

*Includes 1 cent state tax, Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Grand Junction	21.5	23 5	5 0	15.0
Pueblo	19.0	21.0	5.0	10.0
Casper, Wyo.	19.5	21.5	5 0	11.5
Cheyenne	19.5	21.5	5.0	13 0
Butte, Mont.	21 0	23.0	6.0	14.5
Billings	22.5	24.5	6.0	14 5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	21.0	23 0	5.0	16 0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	19.0	21.0	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price 4 cents except in Montana where a discount of 2 cents off tank-wagon price is allowed; divided dealer accounts 3½ cents.

Pacific Coast Territory

STANDARD OIL CO OF CALIFORNIA

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
San Francisco	17.0	18.0	4.0	11 5
Los Angeles	16 5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	20.5	21.5	6.0	‡16.0
Reno, Nev.	19.5	20.5	5 0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20 5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23 5	6.0	16.5

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents; to split dealers, 2 cents. To commercial consumers: on tank-wagon price: on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

‡Includes 5-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Post. deal.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Albany, N. Y.	12.7	....	4.0	7.75
*Met. N. Y.:				
Manhtn. Bronx	12.7	....	4 0	7.25
Staten Island	13.0	....	4.0	7.25
Qu'ns & Br'klyn	12.7	....	4.0	7.25
Buffalo	13.5	....	4 0	8.25
Rochester	13.5	....	4.0	8.25
Syracuse	13 5	....	4.0	8.75
Boston, Mass.	12.5	....	4.0	7.50
Portland, Me.	14.5	....	5.0	7.75
Manch'ter, N. H.	15 0	....	5.0	8.00
Burlington, Vt.	14.7	..	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline Tank wag. dlr.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	13.5	16.0	5.0	9.5
Pittsburgh	16.0	19.5	5.0	10.0
Allentown	14 0	....	5.0	10.0
Erie	15.0	....	5.0	10.0
Scranton	14.0	....	5.0	10.0
Altoona	16.0	....	5.0	10.0
Dover, Del.	14.0	....	5.0	10.0
Wilmington	13.0	....	5.0	10.0
Springf'd, Mass.	13.0	....	4.0	7 0
Worcester	13.5	....	4.0	7.75
Hartford, Conn.	12.9	....	4.0	7.0
New Haven	12.8	....	4.0	7.5
Providence, R. I.	11.5	....	3.0	7.0

Price basis to undivided dealers—Dealer tank-wagon less .5 cent per gallon.

Consuming accounts not under contract—when made by tank-wagon in quantities of 50 gallons or over, tank-wagon dealer price.

Commercial accounts under contract—annual consumption 2,500 to 100,000 gallons per year, 1 cent above posted tankcar price; over 100,000 gallons per year, .5 cent above posted tankcar price.

Naphtha

STANDARD OIL CO (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15 0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
N. Orleans, La.	19.5	23.0	*10.0	†11.0
Baton Rouge	17.5	21.0	8.0	11.5
Alexandria	18.0	....	8.0	9.5
Lafayette	18.5	....	8.0	12.5
Lake Charles	18 5	....	8.0	10.0
Shreveport	17.0	....	8.0	10.0
Knoxville, Tenn.	20.5	....	8.0	14.0
Memphis	18.5	22.0	8.0	9.5
Chattanooga	20.0	....	8.0	11.5
Nashville	19.5	....	8.0	10 0
Bristol	19.25	....	8.0	14 5

*Includes 2-cent parish tax. †Includes 1 cent parish tax and 1 cent state tax.

Price basis to commercial consumers: Louisiana, effective Aug. 15, 1935. Contract consumers 2.5 cents above tankcar price less the following discounts on a gallonage basis; 3,001 to 10,000 gallons per month, .5 cent; 10,001 to 20,000, 1.0 cent; 20,001 to 40,000 gallons, 1.5 cents; over 40,000 gallons per month, 2.0 cents. In Tennessee, effective Feb. 11, 1935, commercial consumer at the tankcar price plus the following: Up to 35,999 gallons per year, 2.5 cents; 36,000 to 119,999 gallons, 2.0 cents; 120,000 to 239,999 gallons, 1.5 cents; 240,000 to 479,000 gallons, 1.0 cent; over 480,000 gallons, .5 cent over tankcar.

Louisiana kerosene prices include 1-cent state tax.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Omaha	17.8	19.8	6.0	9.5
McCook	18.5	20.5	6.0	10.2
Norfolk	18.2	20.2	6.0	9.9
North Platte	18.6	20 9	6.0	10.3
Scotts Bluff	19 3	21.3	6.0	11.0

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective January 1, 1935.

Southwestern District

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Dallas, Tex.	15.0	17.0	5.0	7.5
Fort Worth	15.0	17.0	5.0	8.5
Houston	16.0	18.0	5.0	7.5
San Antonio	15.0	17 0	5.0	7.5
El Paso	17.0	19.0	5.0	8 0
Muskogee, Ok.	16.0	18.0	5.0	8.0
Okla. City	16.0	18.0	5.0	8.0
Tulsa	16.0	18.0	5.0	6.0
Ft. Smith, Ark.	16.5	18.5	5 0	8.0
Little Rock	19.0	21.0	7.5	9.0
Texarkana	16.5	18.5	5.0	8.5

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Ohio points	17.5	(†)	5.0	*13.5

*Includes state tax of 1 cent.

†Following the leasing of service stations to dealers at many points the company no longer posts a statewide service station price.

Canada*

3 Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Gasoline Tank wag.	Gasoline Serv. sta.	Inc. tax	Kero. tank-wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23 5	6.0	17.0
Brandon, Man.	29.8	32.8	7.0	22.3
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	30.5	33 5	7.0	24.2
Calgary, Alta.	28.0	31.0	7.0	21.5
Vancouver, B. C.	22.0	26.0	7.0	23.6
Montreal, Que.	18.5	....	6.0	17.5
St. John, N. B.	24.0	28.0	8.0	18.5
Halifax, N. S.	24 0	28.0	8.0	18.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal when discounts below station prices are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. (Indiana) December 4 advanced tank-wagon kerosene .3 cent at all points in Illinois, Iowa, Minnesota, Wisconsin, North and South Dakota and in Evansville and St. Joseph.

Standard Oil Co. of New Jersey November 26 reduced tank-wagon kerosene 1 cent in Atlantic City; December 2 converted service stations in Roanoke to dealer basis of operation and discontinued posting service-station prices.

Standard Advances Prices

Effective December 9, Standard Oil Co. (Indiana) advanced tank-wagon and dealer gasoline prices .3 cent per gallon in Illinois, Indiana, Iowa, Kansas, northern Michigan, Minnesota, Missouri, North and South Dakota and Wisconsin. Subnormal prices were correspondingly advanced in the same area, with the exception of southwest Kansas where changes in subnormal prices were made December 4.

On the same date Standard made certain adjustments in normal tank-wagon and dealer prices in the lower peninsula of Michigan on motor gasolines and also tank-wagon prices on tractor fuels and kerosene. At that time prices on these products, where subnormal, were advanced to the new normal basis, except in Detroit metropolitan area no changes were made on tank-wagon and dealer prices of motor gasolines.

None of these changes were made in the accompanying table which shows Standard's prices effective December 8.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of December 8, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (3d gr.)	.04¾	.04⅞
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.05¾	.05⅞
60-62 400 grades:		
62 octane and below (3d gr.)	.04¾	.04⅞
63-67 octane	.05⅛	.05⅜
68-70 octane (regular)	.05¾	.05⅞
64-66 375	.05	.05⅛
68-70 360	.05¼	.05⅜

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¾	.04⅞
63-67 octane	.05⅜	.05⅝
68-70 octane (regular)	.05¾	.05⅞
60-62 400	.04¾	.04⅞
64-66 375	.05	.05⅛

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below	.05½	.05¾
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below	.05½	.05¾
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¾	.04⅞
63-67 octane	.05⅛	.05¼
68-70 octane (regular)	.05¾	.05⅞
60-62 400 grades:		
62 octane and below	.04¾	.04⅞
63-67 octane	.05⅛	.05¼
68-70 octane (regular)	.05¾	.05⅞
64-66 375	.05	.05⅛
68-70 360	.05¼	.05⅜

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:		
Below 60 octane		.05½
60-64.9 octane		.07
65-70 octane		.07¼
64-66 375		.05⅜
68-70 350		.06

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08
58-60 400	.07¾	.08½

EAST COAST (domestic)—

U. S. Motor below 60 octane:		
*New York (Bayonne)		.06¼
Baltimore		.06¼
U. S. Motor, 60-64.9 octane:		
*New York (Bayonne)		.06½
Philadelphia	.06½	.06¾
Boston		.06¾
Baltimore	.06½	.06⅝
Charleston, S. C.		.06¾
U. S. Motor, 65 and above:		
*New York (Bayonne)		.06¾
Philadelphia	.06¾	.07
Boston		.07
Baltimore	.06¾	.07
Charleston, S. C.		.07

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05½	.05⅝
64-64.9 octane	.05⅝	.05¾
65 octane and higher	.05⅞	.06

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05⅜
52-54 450 (blending)	.05⅝
54-56 450 (blending)	.05½

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.04¾
Grade 18-55	.05⅝	.05¾
Low vapor pressure grade:		
*14-pound v.p. (max.)	.06¼	.06⅜
*12-pound v.p. (max.)	.06⅝	.06⅞

*Nominal.

NORTH TEXAS—

Grade 26-70		.04⅝
Grade 18-55	.05⅜	.05⅝

CALIFORNIA—

75-85 375-390	.07	.07¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.05	.05⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03⅝
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.03¾
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04½

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅝	.03¾
42-44	.03¾	.03⅞

NORTH TEXAS—

41-43	.03⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03¾	.04

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04	.04¼

PENNSYLVANIA (inland refineries)—

45	.04¾	.04⅞
46	.04⅞	.05
47	.05	.05⅛

CHICAGO (Based on Group 3)—

41-43	.03½	.03⅝
42-44	.03⅝	.03¾

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

41-43		.04⅝

*GULF COAST (domestic)—

41-43		.04¼

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03⅝	.03¾
No. 1 straw, 38-40	.03⅝	.03¾
No. 2 straw, 32-36	.03½	.03⅝
No. 2 dark, 32-36	.03⅝	.03½
No. 3, zero to 15, 28-32	.03⅛	.03⅜
No. 3, 15 and above, 28-32	.02¾	.03

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅝	.03¾
No. 1 straw, 38-40	.02⅝	.03¾

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.03⅜	.03½

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36		.03⅜
No. 3, 28-32		.03½

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-40	.03½	.03¾
No. 1 straw, 38-40	.03⅜	.03⅝
No. 2 straw, 32-36	.03⅜	.03½
No. 2 dark, 32-36	.03⅛	.03⅜
No. 3, zero to 15, 28-32	.03⅛	.03¼
No. 3, 15 and above, 28-32	.02⅝	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1	.04½	.04⅝
*No. 2	.04¼	.04⅜
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.02⅞
No. 4, low cold test, 24-28	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test, 18-22	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02½	.02¾
No. 4, low cold test, 24-28	.95	1.00
No. 5, low cold test, 18-22	.72½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02⅝	.02¾
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅛	.02⅝
No. 4, low cold test, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.80	.82½
No. 5, low cold test, 18-22	.75	.80
No. 6, low cold test, 10-16	.65	.70

PENNSYLVANIA (inland refineries)—

36-40	.04½	.04⅝

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	.95	1.15
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.05	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.75	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.75
San Francisco:		
27 plus diesel		1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03½	.03⅝
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.95
Bunker C (bunkers)		.95

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04½
28-30 diesel (lighterage 6¼ per bbl.)		1.65
28-30 diesel (tankcars)	.04¼	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.15
Industrial fuel (tankcars)		.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:		
190-200 D, 15-25		.20
150-160 D, 0-10		.17
150-160 D, 15-25		.16½
150-160 E, 15-25		.16
100-110 D, 0-10		.15½
Steam refined:		
631 green (treated)		.13
600 dark green (untreated)		.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):

10 pour test	.24	.24½
15 pour test	.23	.23½
20 pour test	.22	.22½
25 pour test	.21	.21½
Steam refined:		
600	.13	.13½
650	.14	.14½
600 Pennsylvania flash	.15	.15½
630 flash	.17	.17½
600 Warren E filtered	.16	.16½

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:		
150-3		.08½
180-3		.09½
180-4		.09
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.11½
300-3½		.12½
400-3½		.13½
100-2½ paraffin oil		.05¾
15-20 Cold Test:		
200-3		.09½
200-4		.09
250-3		.10½
250-4		.10
280-3		.11½
280-4		.11

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09¼	.09½
2,000-4	.09½	.10
Red Oils:		
200-5-6	.06¾	.07
300-5-6	.07	.07½
500-5-6	.08	.08½
750	.08½	.09
1,200-5-6	.09	.09½

CALIFORNIA (moving to dom. market)

Pale Oils:		
100-2½-3		.06
200-2½-3		.06½
300-3-3½		.06½
400-3-4	.08½	.09¼
450-3-4	.09¾	.10
550-3-4	.10	.10¼
600-3-4	.10¼	.10½
Red Oils:		
200-4-5		.06
300-5-6		.06¼
350-5-6	.07	.08
400-5-6	.08	.08½
450-5-6	.08¼	.08½
500-5-6	.08½	.09
600-5-6½	.09	.09½
700-6½ plus	.09¾	.10
750-6½ plus	.10	.10¼
900-6½ plus	.10¼	.10½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:		
Zero pour test	.21½	.22
10 pour test	.20½	.21
15 pour test	.20	.20½
25 pour test	.19	.19½
180 vis. at 70° F., 3 color:		
25 pour test	.21½	.22
200 vis. at 70° F., 3 color:		
Zero pour test	.25	.25½
10 pour test	.24	.24½
15 pour test	.23½	.24
25 pour test	.22½	.23

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½	.02⅝

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0245	.0250
124-126 (a.m.p.) w.c. scale	.0250	.0255

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0445
125-127 (a.m.p.) wax		.0455
128-130 (a.m.p.) wax		.0480
130-132 (a.m.p.) wax		.0505
133-135 (a.m.p.) wax		.0535
135-137 (a.m.p.) wax		.0560
124-126 (a.m.p.) w.s.	.0240	.0250
124-126 (a.m.p.) y.s.	.0240	.0245
Petrolatum in barrels, carload lots:		
Dark green		.01⅞
Amber	.02⅞	.03
Extra amber	.03	.03⅛
Lily white	.06⅝	.06¾
Snow white	.07⅜	.07⅝
Cream	.05⅝	.05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05¼
60-62 400		.05⅜
61-63 390	.05⅜	.05½
64-66 375		.05⅝

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05¼
Above 69 octane	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03⅝
41-43 water white		.03¾
41 water white		.04½

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:	
600 Warren E	.22½
600 S.R. unfiltered	.20
650 S.R. unfiltered	.20¾
600 flash S.R.	.22
630 flash S.R.	.24½
Bright Stocks:	
8 color	.29½
6½ plus color in dilution	.28

NEUTRAL OIL

200-3 color	.27½
150-3 color	.24

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.	.04125
125-127 a.m.p.	.0425
128-130 a.m.p.	.0450
133-135 a.m.p.	.0525
135-137 a.m.p.	.0550
Crude scale:	
124-126 w.s.	.0260 .0270
124-126 y.s.	.0245 .0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Talco (Nov. 1, 1936)	.65
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gulf Oil Corp. Talco by Humble Oil & Refining Co.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co., and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.18
Grass Creek, Wyo., heavy (Nov. 4, 1936)*†	.62
Hamilton Dome, Wyo. (Nov. 4, 1936)*	.67
Elk Basin, Wyo., light *†	1.18
Frannie, Wyo., heavy*	.62
Frannie, Wyo., light (Nov. 4, 1936)	.70
Hogback, N. Mex.*	1.21
Pondera, Mont. (Jan. 26, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo. (Nov. 1, 1936)†	1.08½
Artesia, N. Mex. (Jan. 9, 1936)‡	.80
Maljamar, N. Mex. (Jan. 9, 1936)‡	.80
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.95
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.85
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet (Nov. 1, 1936)	.95
Mirando (Nov. 1, 1936)	.90
Pettus	1.35
Taft (Nov. 1, 1936)	.95
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85
Flour Bluff (Nov. 1, 1936)	See gravity table

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex. (Nov. 1, 1936)	.95
Refugio, Tex., heavy (Nov. 1, 1936)	.95
Tomball, Tex.	1.30
Lafitte, La.	1.12
Livingston, Tex.	1.45
Bosco, La. (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
O'Connor (Nov. 1, 1936)	.95
McFaddin (Nov. 1, 1936)	.95
Satsuma (Nov. 1, 1936)	1.15
Heyser, light (Nov. 1, 1936)	1.15
Heyser, heavy (Nov. 1, 1936)	.90
Placedo (Nov. 1, 1936)	.90
Plymouth (Nov. 1, 1936)	See gravity table for Gulf Coast pools
Welsh, La.	.96

Middle Western States

OHIO OIL CO.

Lima (Sept. 22, 1936)	$1.15
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)*	1.23
Midland, Mich. (Sept. 16, 1936)*	1.32
Midland, Mich. (Sept. 28, 1936)†	1.37
West Branch, Mich. (Sept. 16, 1936)	1.16
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Nov. 1, 1936)	1.28

*Posted by Simrall Corp. and Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. †Old Dutch Refining Co.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$ .75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Standard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita counties, Arkansas.

Eastern States

TIDE WATER PIPE LINE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Sept. 18, 1936)	1.32

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	2.42
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.41
Includes Tidioute district.	
Group C	2.40
Includes Turkey and Tidioute districts.	
Group D	2.39
Includes Bear Creek and Porkey districts.	
Group E	2.36
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on lengths of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$.895

*F.o.b. ship, based on October transactions and exclusive of production and export taxes and bar dues.

John C. Miller, special representative in the sales department of the Mid-Continent Petroleum Corp., Tulsa, is recovering from an illness which has kept him from his office for two weeks.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Flour Bluff, Turtle Bay Anahuac Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Oreutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.92	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.89
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1.01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.26	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.10 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.33 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended Dec. 5 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	7,700	105	98½	104⅜	Amerada Corp.	788,675	N.P.	50cQ	10-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	13,900	31⅞	30¼	31¾	Atlantic Refining	2,664,904	$25	50cQ¶	12-15-36	1.00	28	20½	35¼	21½
20¾	14⅛	39,600	20¾	19¼	20½	Barnsdall Corp.	2,131,090	$5	20cQ	11-2-36	‡.20	14¾	5⅞	10	5⅞
23⅜	14	39,000	18⅝	17½	17½	Columbia Gas & Elec.	11,610,036	N.P.	20c	11-16-36	.20	15¾	3⅜	19¼	6⅝
15¼	11½	103,600	14⅝	13⅛	14½	Consolidated Oil Corp.	13,983,287	N.P.	40cQ¶	11-16-36	.25	12¼	6½	14¼	7¼
39½	28⅛	32,300	39½	37	39¼	Continental Oil of Delaware	4,682,671	$5	25c Spl.	12-15-36	.62½	35	15⅛	22¾	15¾
34¾	21	59,800	32½	27⅛	32¼	Barber Co.	387,149	$10	50c	12-10-36	.25	22½	11⅜	23½	12
12¼	6⅜	42,000	11⅜	10	11⅛	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
30⅞	17¼	7,100	29½	27¾	29¼	Mid-Continent Petroleum	1,843,872	$10	75cSA	12-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	3,500	23	21	22½	Mission Corporation	1,399,345	N.P.	....	.....	....	17¾	10⅜	..	..
75½	19⅞	900	68½	67	68	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12⅛	115,700	16¼	14¼	16¼	Ohio Oil Co.	6,563,377	N.P.	35cSA	12-15-36	.30	14¼	9¼	15⅞	8½
18⅞	11¾	4,200	18¾	17⅞	18½	Pacific Western Oil	1,000,000	N.P.	65c	12-18-36	.25	14	6¾	9⅜	5½
4¼	1⅜	9,400	3⅝	2¾	3⅝	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	25,900	47½	45⅛	47½	Phillips Petroleum	4,152,836	N.P.	$1Q¶	12-1-36	1.25	40	13¾	20¾	13⅜
22¾	11⅞	41,100	22¾	19¾	22¾	Plymouth Oil Co.	1,050,000	$5	40c	12-22-36	.25	13	6½	16¾	7¼
24⅞	16	53,300	19⅛	17⅜	19⅛	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30½	16,500	37½	33¾	37½	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	12-15-36	1.00	36⅞	20¾	33⅜	20¾
28	14¾	14,300	27	25¼	26⅝	Shell Union Oil	13,070,625	N.P.	25c	12-15-36	....	16½	5½	11½	6
127½	110½	7,800	125¼	123½	125¼	Shell Union Oil pfd.	400,000	$100	26⅛c	12-15-36	....	111	63⅛	89	57
6¾	3½	1,500	4	3¾	4	Simms Petroleum	461,698	$10	$1.25 liq.	7-20-36	11.75 liq.	18¾	4¾	17⅛	7⅛
39	19½	11,100	39	36	39	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17½	12½	61,000	16⅛	15½	16	Socony-Vacuum	31,151,075	$15	25cSpl.	12-15-36	.30	15¾	10⅝	19⅞	12½
47⅝	35	35,400	41¼	38	41	Standard Oil of California	13,014,754	N.P.	30cQ¶	12-15-36	1.00	41⅛	27¾	42⅞	26½
45¼	32¾	24,700	45⅛	42⅝	44¾	Standard Oil (Indiana)	15,215,677	$25	$1.25Q¶	12-15-36	1.00	33⅜	23	32¾	23¼
30¾	25	300	30½	29	29	Standard Oil of Kansas	200,000	$10	....	10-31-34	....	32	20	41	26
70⅛	51⅛	45,800	66¾	64¾	66⅜	Standard Oil of New Jersey	25,856,081	$25	$1.25SA¶	12-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	900	77	76	76	Sun Oil	1,733,016	N.P.	25cQ**	12-15-36	$1 & 7% Stk.	77	60½	74¼	51½
50⅜	28⅞	44,100	50¼	48⅛	49⅝	Texas Corp.	9,340,069	$25	25cQ†	1-1-37	1.00	30¼	16½	29⅜	19⅝
15¼	7½	19,400	13⅜	12¼	13¼	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
8⅝	4⅜	162,100	8⅜	6⅝	8⅜	Texas Gulf Producing Co.	888,094	N.P.	5c	12-15-36	....	4¾	2½	7	3⅜
21⅝	14⅜	9,400	20⅛	19⅛	20	Tide Water Associated	5,642,342	N.P.	15cQ	12-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	900	105	104⅜	105	Tide Water Associated pfd.	626,221	$100	$1.50Q	1-2-37	§6.50	104½	84	87	64½
28½	20¾	14,700	25¼	23⅝	25	Union Oil of California	4,386,070	$25	25cQ	11-10-36	1.00	24	14¾	20½	11½
31⅝	22⅝	500	27⅜	27	27½	Union Tank Car Co.	1,200,000	N.P.	30cQ	12-1-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	22,900	5⅛	4	5	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3⅛	1	5¾	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ¶Dividend 4/75 Mission Corp. paid 3-15-35. ‖Includes extras. **Plus 6% stock.

New York Curb Exchange

1936 High	1936 Low	Week ended Dec. 5 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
21	13¼	2,800	18⅞	17⅞	18¾	Bridgeport Machine Co.	260,000	N.P.	$1	12-21-36	....	14⅛	3¾	3¾	½
50	39¾	200	48	46	46	Buckeye Pipe Line Co.	200,000	$50	$1Q	12-15-36	$3.00	42½	30½	38	26
4⅞	1⅞	10,000	2⅜	2⅛	2¼	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	50	118	118	118	Chesebrough Mfg. Co.	120,000	$25	$2.50Q†	12-21-36	6.50	157	115	150	116
7⅜	3	45,900	3¾	3½	3⅝	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4⅛	1½	16,600	3½	2¾	3⅛	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	½
34⅜	19⅞	17,800	34	31¼	32½	Creole Petroleum	6,974,356	$5	25cSA	12-15-36	.20	23¾	10	14⅝	9⅝
16⅝	9	7,300	16¾	15½	16¾	Darby Petroleum	351,390	$5	25cSA	7-15-36	.50	8⅞	4	7½	4⅛
6¾	1⅞	2,400	6⅛	5¼	6	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
47	38½	50	46	46	46	Eureka Pipe Line	50,000	$50	$1Q	11-2-36	4.00	38	33¼	37	30
117	72	6,500	109¾	106⅛	108½	Gulf Oil Corp.	4,538,101	$25	75c†	12-10-36	....	74¾	50¼	76¾	49¾
76½	57	8,500	74½	71⅜	74	Humble Oil & Refining (new)	8,923,935	N.P.	50c†	12-26-36	1.25	64	44	49½	33¼
24½	20	10,900	21⅞	19¾	20½	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	12-1-36	1.25	22½	15⅝	17⅞	12⅝
9¾	5½	800	8⅝	8⅛	8⅛	Indiana Pipe Line	300,000	$10	20c Spl.	12-17-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	32⅞	14,800	34⅜	32⅝	34⅜	International Petroleum	14,247,088	N.P.	$1.25†‡	12-1-36	2.50	39⅜	28	33⅜	19⅜
15⅜	9⅞	11,900	13¼	12⅝	13⅛	Louisiana Land & Exp.	3,000,000	N.P.	20cQ†	12-15-36	.10	11⅜	4⅜	5	2⅛
15½	7⅜	8,500	14¾	14⅜	14½	Lion Oil Refining	270,000	N.P.	50c	10-15-36	....	8⅛	3½	6	3⅜
14¼	9⅞	4,800	12¼	11⅜	11½	Lone Star Gas	5,382,723	N.P.	20c	12-24-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	5,600	6¾	6	6⅛	Mountain Producers	1,682,182	$10	30cSA	12-21-36	.90	5¾	4⅛	5½	4
23	17⅝	4,400	19	17¾	17¾	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-36	1.25	20	11¾	18⅛	13⅛
15¾	9¼	900	10⅝	10⅛	10¼	National Transit	509,000	$12.50	35cSA	12-15-36	.75	10⅝	6¾	9½	7
4⅝	2⅞	2,700	4⅝	4⅛	4¼	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1⅜
6⅝	1⅝	2,000	2⅞	2¾	2⅞	New Mexico and Arizona	1,000,000	$1	1c	12-1-36	....	2½	1	2¾	1
15¾	9¼	No sales	..	..	..	New York Transit	100,000	$5	15cSA	10-15-36	.30	4⅞	3	4¾	3
9¾	4⅞	300	9¾	9¾	9¾	Northern Pipe Line	120,000	$10	35c	1-2-37	.50	8	5¼	7	4⅝
8⅜	3¼	86,400	8⅜	7	8	Pantepec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4¼	11,200	15	14	14¾	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4⅜	1⅞	1,300	3⅝	3¼	3⅜	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
43	32¼	1,700	43	42	43	South Penn Oil	1,200,000	$25	90c†	12-29-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	200	4¼	4¼	4¼	Southern Pipe Line	100,000	$10	10cSA	9-1-36	.30	5	3⅞	5½	3½
60	44⅜	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	10-1-36	5.00	56	44¼	47	41
23⅜	17⅛	3,500	20¼	19¼	19½	Standard Oil of Kentucky	2,604,790	$10	50cQ†	12-15-36	1.25	24	18	18⅜	14⅝
14⅝	11	500	13¼	13¼	13¼	Standard Oil of Nebraska	188,403	$25	25c	12-19-36	....	12	7¾	16⅞	8¼
40	21⅜	8,000	39¼	36¼	36¼	Standard Oil of Ohio	753,740	$25	$1.50†	12-21-36	....	23⅝	11½	28½	12¼
5	2⅝	14,800	3⅜	3¼	3⅝	Sunray Oil	1,610,810	$1	5c	12-21-36	....	2⅞	⅞	2	⅛
9¾	5⅜	2,900	6¼	6	6⅛	Texon Oil & Land	336,028	$2	15cQ	12-28-36	.60	6⅞	5	11	4⅜

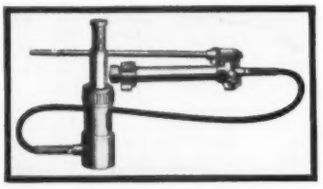
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

NEW OR IMPROVED EQUIPMENT

New Portable Hydraulic Jacks Have Many Oil-Field Uses

Two portable hydraulic jacks perfected by the Blackhawk Manufacturing Co., Milwaukee, Wis., are applicable to a wide variety of jobs in the oil industry. They differ from ordinary hydraulic jacks in that the ram and pump are separated by



reinforced, flexible hose. This permits special adaptations of the ram because the pump does not hamper use of the jack in close quarters or require the operator to be in cramped and dangerous positions at the point where the lifting is done.

The 20-ton S-67 model, shown in the illustration, has an 8-foot hose and is used for heavy-duty work. Collapsed height of the ram is 10¼ inches; hydraulic lift, 4¼ inches; screw extension, 3¾ inches; overall height, 18 inches. An overall diameter of only 4½ inches makes the S-67 ram especially desirable in close quarters for work requiring great power efficiency.

The S-66 model, of 7-ton capacity, has a 6-foot hose and a short ram which measures only 4½ inches when collapsed. This ram saves the dismantling of many jobs because it fits into places where clearance is at a minimum. The plunger travels 2½ inches and is made to fit two adapters which multiply the combinations in which the jack may be used.

These new jacks are particularly useful for leveling and bending conduits in the field, forcing pipe, leveling oil tanks for foundation work, pressing gears and pulleys, straightening beams, and other jobs requiring remote-control, hydraulic power in close quarters.

Here and There With Men Who Manufacture Equipment

P. L. (Dusty) Rhodes, of Chatham, N. J., president of the Rhodes Packing Co., has been appointed southern sales representative by the Homestead Valve Manufacturing Co., Coraopolis, Pa. Mr. Rhodes plans a nine-month tour of the southern, southwestern and western states.

George Collom, well known throughout the Gulf border territory, is now representing Thornhill-Craver Co. in Southwest Texas for Unibolts. He is making headquarters at Corpus Christi, Tex.

The Missouri Rolling Mill Corp., St. Louis, has appointed the Fouts Co., Kilgore, Tex., sales representative for its diamond-type steel derricks, with stocks in Kilgore serving East Texas, and in Odessa serving West Texas. C. M. and C. P. Fouts are in charge in Kilgore, and Thomas E. Brandon is in charge in Odessa.

The Jarecki Manufacturing Co. has opened a store in Rodessa, La., with D. B. Curry as manager and field salesman. Paul Carpenter and J. E. Chism are the store men.

I. Frank Brown has appointed B. E. Johnston as his South American representative. Mr. Johnston was with the Lago Petroleum Co. for many years. Mr. Brown is export representative of Globe Oil Tools Co., Guiberson Corp., Texas Rubber and Specialty Corp., Fred I. Getty, and Shaffer Specialty Corp.

The Broderick & Bascom Rope Co., St. Louis, Mo., has taken space in the Midland warehouses, 1500 South Western Avenue, Chicago, where it will carry stocks of B&B standard construction wire ropes and of Flex-set preformed wire ropes. E. M. Stephanus is in charge.

The O. C. Field Gasoline Corp. and the Casmite Co. have removed their general offices to 950 Wilshire Boulevard, Los Angeles, Calif.

Screening Research Laboratory

A research department, strictly for use of industries, installed by the Productive Equipment Corp., 4600 South Kedzie, Chicago, offers free service in the art of screening, filling a need for those who do not maintain their own laboratory. Vibrating screens were invented and developed since the World War and the new applications for screens has led to the handling of an enormously diversified number of products.

Diesel Anniversary Observed

C. F. Camp, president of the C. F. Camp Co. of Tulsa, was host to about 150 oil executives and civic leaders at a luncheon in the Mayo Hotel, Tulsa, on December 2. In commemoration of the fortieth anniversary of the diesel engine, this luncheon was synchronized with one held by the New York Power Show at the Waldorf Astoria Hotel, New York. A speaking program of unusual interest carried out at the New York luncheon was broadcast over a national network, with John B. Kennedy as master of ceremonies. The C. F. Camp Co. is distributor for the Caterpillar tractor.

REDA HAS TYLER OFFICE

CHARLES HALM

Reda Pump Co., manufacturer of the Reda electrical centrifugal oil-well pump, has opened a sales office at 207 East Front, Tyler, Tex., with Charles Halm in charge.

Saving of Current Is Feature of Arc-Welding Development

A new development in arc-welding is announced by the Hobart Brothers Co., Troy, Ohio. The Hobart serial MN current-saving models embody

(in addition to an improved type of wheel-mounting with low center of gravity) what is termed selective motor horsepower control.

One-third the usual starting current is said to be required. The power factor of the machine and its efficiency are materially improved, and it is possible to use the equivalent of a motor of one-half the horsepower rating for welding in ranges up to one-half to two-thirds the rated capacity of the generator.

The manufacturer's announcement says welding current costs are cut 30 to 50 per cent in average work, power company penalties due to poor power factor of equipment are avoided, expensive rewiring of many plants is eliminated, and idling and light-load power losses are cut.

Power factor of the equipment is improved in the light-load ranges. This feature is important when heavy electrical power consumption leads to imposition of penalties on equipment with poor power factor. Operation of the selective motor horsepower control is accomplished by using only one hand. A latch locks the handle in the "low" position, where only half the rated motor horsepower is used for starting and for welding up to one-half the rated generator capacity in continuous manual arc welding (up to two-thirds rated capacity for intermittent welding). When it is desired to operate at higher rates, a lever releases the handle for turning to the "high" position where the full rated horsepower of the motor is available for full-load and overload welding.

Rockwood V-Belt Drive Offered With Pivoted Motor Base

The Rockwood Manufacturing Co., of Indianapolis, Ind., which has a complete line of V-belts, including cast-iron and steel sheaves and rubber V-belts, now is bringing out its V-belt drives on its pivoted motor bases.

The pivoted motor bases improve V-belt performance as they maintain constant tension in the belts. V-belts stretch and when they stretch they slip and their efficiency falls off. This results in loss of machine output and waste of power. Then the belt surfaces glaze, become hard and wear out more rapidly. When these V-belts are used with Rockwood pivoted motor bases belt stretch is automatically taken up, and belt slip, with its resultant faster belt wear, is eliminated.

With these drives the tension is removed from the belts when the drive is not running. This permits the belts to rest." Used with Rockwood pivoted motor bases, the belt wears much longer.

While Rockwood sells the complete Rockwood drive with its own Rockwood V-belts, the bases can be purchased separately.

Bulletins, Booklets and Other Literature for the Trade

"Airco Acetylene" is the title of a 12-page bulletin presenting a crisp story of acetylene, including a diagram showing the comparative consumption of oxygen. A request sent to the Air Reduction Sales Co., Lincoln Building, New York, brings it.

A 72-page catalog explaining Brown thermometers and pressure gauges in simple nontechnical language may be had by addressing the Brown Instrument Co., Wayne and Roberts Avenues, Philadelphia, Pa.

A request to the Davis Emergency Equipment Co., Inc., 55 Van Dam Street, New York, brings a bulletin which describes and illustrates the McDonald safety hat, which is said to be finding wide favor in the oil fields.

The current number of the Lufkin Line, published by the Lufkin Foundry & Machine Co., Lufkin, Tex., upholds that publication's right to classification as one of the most interesting and beautifully designed house organs printed. Its "Lens and Shutter" section shows various Lufkin installations.

The International Nickel Co., 67 Wall Street, New York, has released its November-December issue of Nickelsworth, published for the suppliers of Monel and rolled nickel.

The General Electric Co., Schenectady, N. Y., offers a four-page bulletin on its type AE-1 air circuit-breakers for industrial and central-station auxiliary service.

The Cooper-Bessemer Corp., Mount Vernon, Ohio, has released a bulletin describing its type GN diesel. This new engine, one of the "N-Line," is built in 3, 4, 6 and 8 cylinders, rated 50 to 58 horsepower per cylinder. The bulletin refers to the type GN as "America's most beautiful diesel engine."

A circular providing information about the new "Dictator" tube-cleaner, for more rapid removal of extremely hard carbon deposits in refinery equipment, is offered by the Roto Co., 156-158 Sussex Avenue, Newark, N. J.

Bulletin No. 164, describing the "Oilwell" portable No. 7 double-engine drive, is being mailed on request by the Oil Well Supply Co., Dallas, Tex.

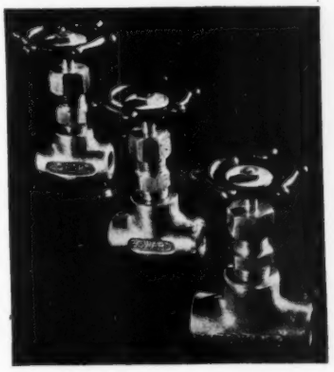
"Speed Control at Work" is the title of an attractively made booklet issued by the Reeves Pulley Co., Columbus, Ind. The booklet is a brief inspection, both by word and illustration, of the methods employed by 12 nationally known manufacturers in gaining complete speed adjustability of production machines in their plants.

Timken Changes Announced

At a recent meeting of the board of directors of the Timken Roller Bearing Co., Canton, Ohio, resignations were accepted from Frederick J. Griffiths as director of the Timken Roller Bearing Co. and president and director of the Timken Steel & Tube Co., and from K. B. Bowman as general superintendent of the steel and tube mills of the Timken Roller Bearing Co. William E. Umstattd was elected president of the Timken Steel & Tube Co., wholly owned subsidiary of the Timken Roller Bearing Co. He will continue to serve as president of the parent company. H. H. Timken, Jr., previously a vice president of the Timken Steel & Tube Co., was made executive vice president of that organization, in addition to being vice president and director of the Timken Roller Bearing Co. W. Robert Timken was elected director of the Timken Roller Bearing Co. and of the Timken Steel & Tube Co. to fill the unexpired term. John E. Fick was appointed general superintendent of the steel and tube mills.

Edward's Line of Forged-Body Gauge Valves Redesigned

The Edward Valve & Manufacturing Co., Inc., East Chicago, Ind., has redesigned its line of forged-body gauge valves. Outstanding features

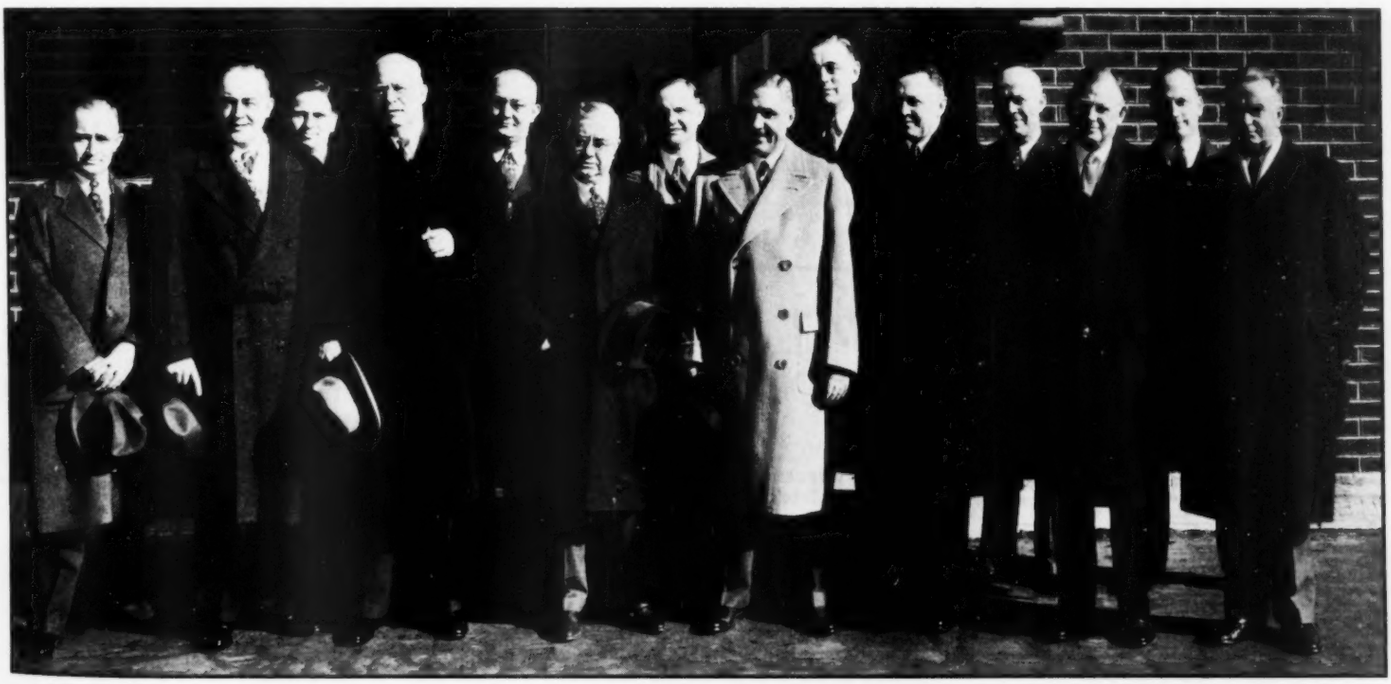


include new-type tight-grip, unbreakable malleable handwheels of oversize dimensions and extra-long taper-threaded bonnet joints. Backseating shoulders prevent hardened stainless stems from backing out and allow repacking under pressure. Large stuffing-boxes use distinctive Edward Evalpak endless molded packing. Drop-forged bodies preclude danger from seams and porosity and permit overstressing with safety.

Taubman Opens Houston Plant

The Taubman Supply Corp., Tulsa, will open its new plant at 7100 Clinton Drive, Houston, Tex., Saturday, December 12. Invitations have been sent to many persons in the oil industry to be guests of the corporation that day, when the plant will be thrown open for inspection. There will be a barbecue and refreshments for visitors.

PROMINENT EQUIPMENT EXECUTIVES ON ANNUAL OIL-COUNTRY TOUR



To become better acquainted with their customers in the oil industry and with oil industry problems, this party of executives of important equipment companies spent several days in Tulsa, leaving Tuesday of this week for Forth Worth and Houston, Tex., on their second annual tour of these points.

Left to right: M. Shields, assistant general manager and J. F. Stephens, general manager, Gustin-Bacon Manufacturing Co., Kansas City, Mo.; D. Tessendorf, Fort Worth representative for Worthington Pump & Machinery Corp.; G. A. Waddle, assistant general sales manager, Goodyear Tire & Rubber Co., Akron, Ohio; Frank L. Meyers, in charge of filter sales for Owens-Illinois Glass Co., Toledo, Ohio; H. L. Gustin, Sr., president, and Charley Wheatley, Gustin-Bacon Manufacturing Co., Kansas City, Mo.; R. S. Wilson, vice president and sales manager, Goodyear Tire & Rubber Co., Akron, Ohio; Puny Blevins, Gustin-Bacon Manufacturing Co., Tulsa; Dean K. Chadbourne, in charge of oil industry sales for Worthington Pump & Machinery Corp., Harrison, N. J.; T. B. Walker, district mechanical goods sales manager for Goodyear Tire & Rubber Co., Dallas, Tex.; R. J. Potts, president, R. J. Potts & Co., Kansas City, Mo.; Virgil Halliburton, development engineer, Gustin-Bacon Manufacturing Co., Kansas City, Mo., and W. C. Winings, manager mechanical goods sales, Goodyear Tire & Rubber Co., Akron, Ohio.

Oil Man's Calendar

December

6-11—New York, National Exposition of Chemical Industries, Grand Central Palace.

8-10—Omaha, Neb., Nebraska Petroleum Marketers, annual convention, Paxton Hotel.

15—Tulsa, annual meeting directors, Mid-Continent Oil and Gas Association.

January

11-15—Detroit, Mich., Society of Automotive Engineers, Book-Cadillac Hotel.

11-15—New Orleans, American Road Builders' Assn., highway exhibit and convention.

12—New York, Mining and Metallurgical Society of America.

16-24—Detroit, Mich., first International Consumers Petroleum Exposition.

18-19—Bismark, N. D., Northwest Petroleum Association, North Dakota Division, Patterson Hotel.

21-22—Minneapolis, Minn., Northwest Petroleum Association, Minnesota Division, West Hotel.

February, 1937

8-10—Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.

23-25—Milwaukee, Annual Convention, Wisconsin Petroleum Association.

23-25—Columbus, Ohio, Ohio Petroleum Marketers Association, annual convention and Trade Exposition, Hotel Deshler-Wallick.

23-25—Milwaukee, Wis., Wisconsin Petroleum Association annual convention, Plankinton Hotel.

Memphis, Tenn., Southwest Sales Conference, Natural Gas Department.

March

1-5—Chicago, American Society for Testing Materials, regional meeting and committee week, Palmer House.

15-19—Philadelphia, Pa., National Oil Burner & Air Conditioning exposition and convention, Convention Hall, Commercial Museum.

17-19—Los Angeles, Calif., A.A.P.G. annual meeting.

April

7-9—Birmingham, Ala., American Institute of Mining and Metallurgical Engineers, Open Hearth Conference.

8-10—Shreveport, La., Petroleum Industry Electrical Assn.

19-24—Houston, Tex., Oil Equipment & Engineering Exposition.

15-16—Cleveland, Ohio, 34th semiannual meeting National Petroleum Association, Cleveland Hotel.

June

1-3—Colorado Springs, Colo., American Petroleum Institute, mid-year meeting, Broadmoor Hotel.

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Box H-541, The Oil and Gas Journal
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The Oil and Gas Journal
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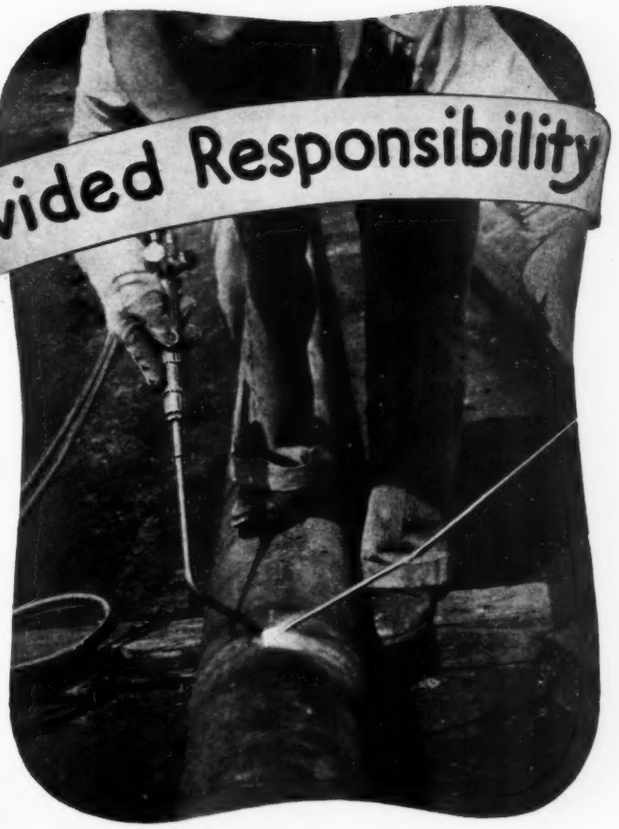

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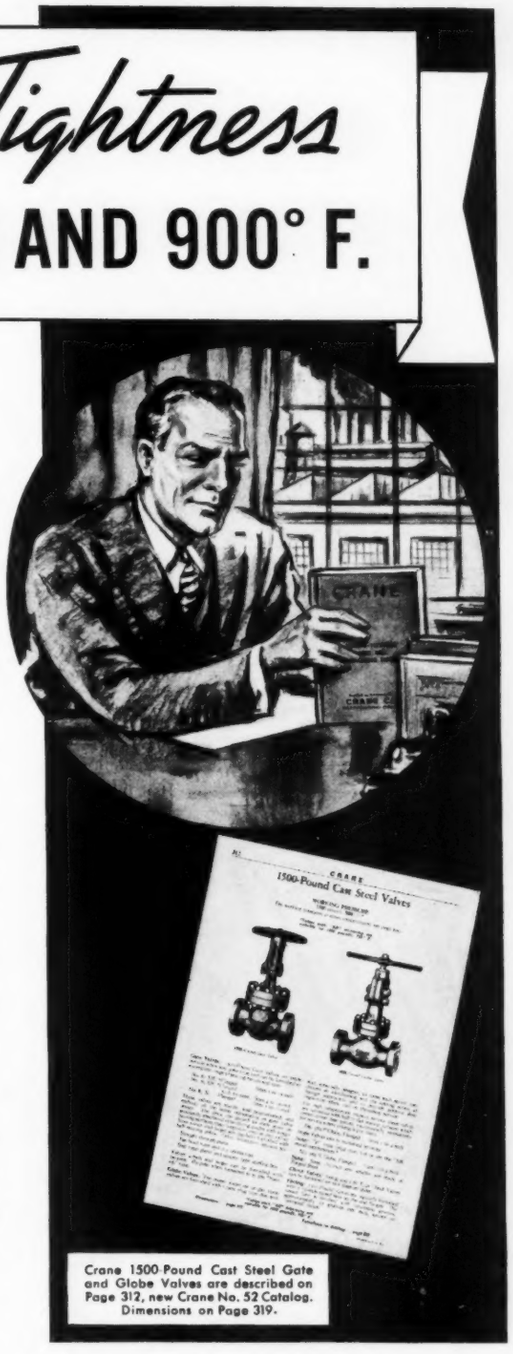
AT 1500 POUNDS AND 900° F.

● Sturdy and well-proportioned, Crane 1500-Pound (3500-pound test) Cast Steel Gate Valves embody the latest refinements in high pressure-temperature gate valve design. The discs are guided to their seats on accurately machined, close-fitting guides with longer bearing surfaces than heretofore used in any valves. Other distinctive features are straight-through ports, tee-head stem and disc connection, ball-type gland, lantern-type stuffing box, and ball-bearing yokes in the larger sizes.

The Crane line of valves and fittings for the oil and gas industry covers every pressure and every pressure-temperature condition common to the industry. Constant research and experiment has placed Crane Co. in a position to meet more severe conditions promptly as they arise.

Standardizing on Crane valves and fittings is your best assurance of absolute dependability. Each has definitely proved its trustworthiness in the service for which intended and Crane Co.'s close control of materials and workmanship plus rigorous testing insure uniformity of performance. Stocks are maintained in all oil and gas centers for your convenience.



Crane 1500-Pound Cast Steel Gate and Globe Valves are described on Page 312, new Crane No. 52 Catalog. Dimensions on Page 319.

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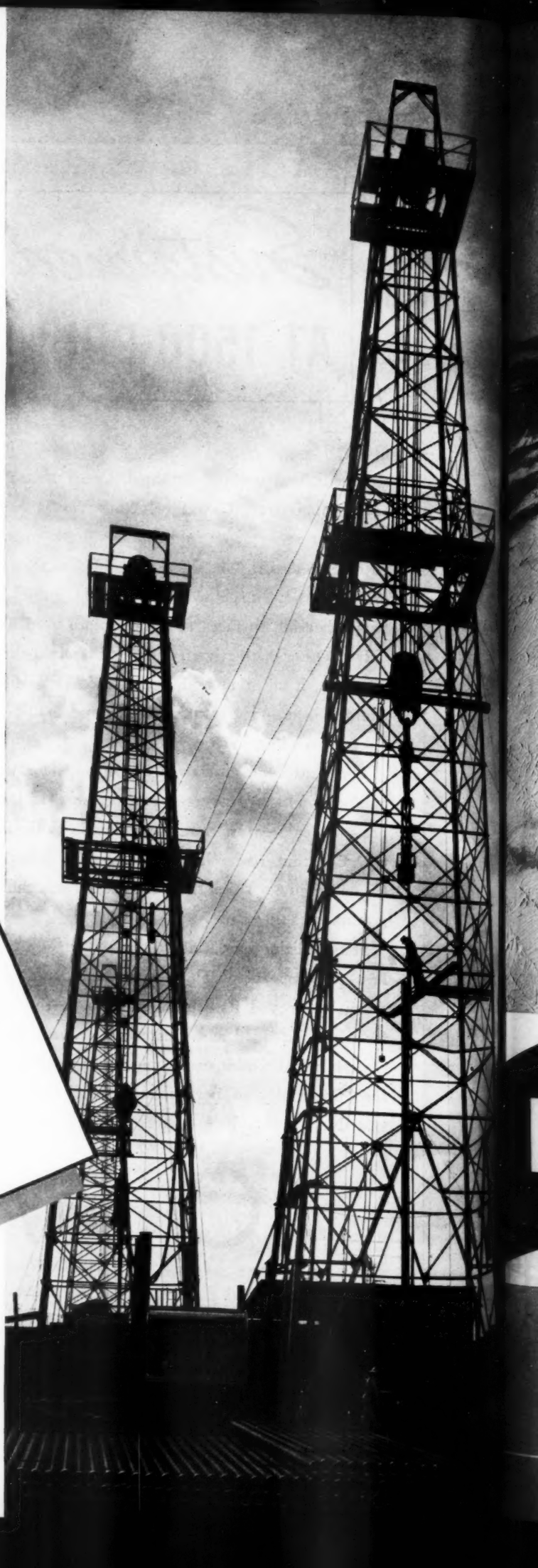

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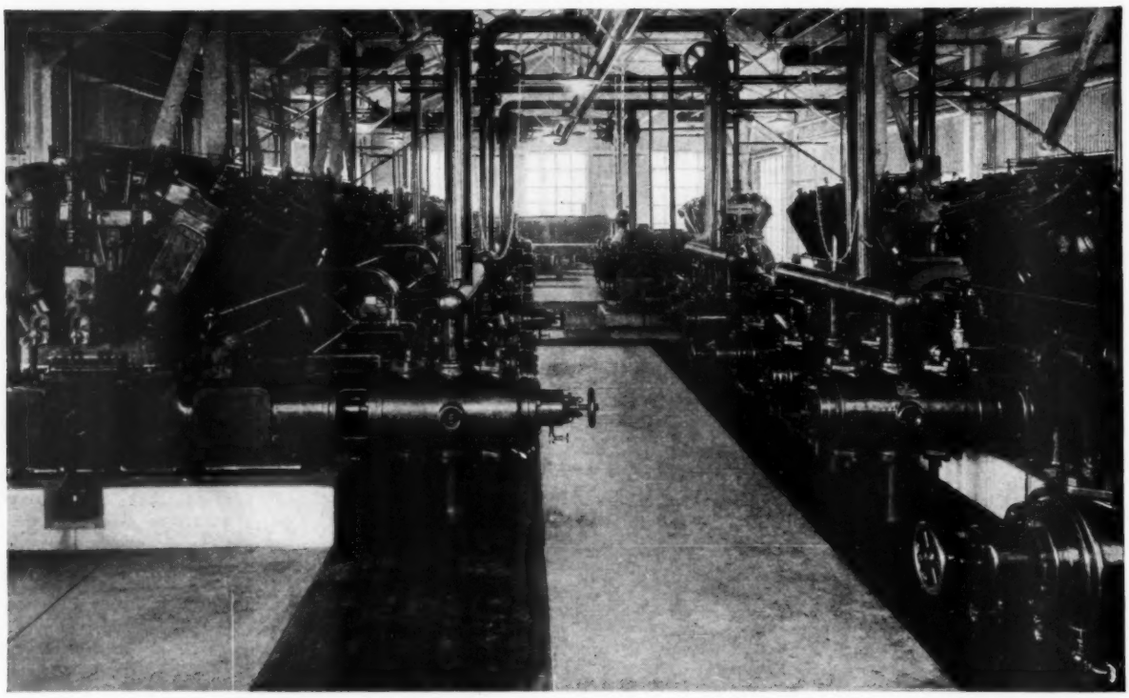

● Compressor parts, valves, engine heads and other parts must operate under long periods of time and usually under conditions calling for cast irons capable of handling moderate temperatures and pressures. These, plus corrosion resistance, are the reasons you find both power and compressor cylinders, valve guides, seats and cams of these Ingersoll-Rand compressor units made of Nickel Cast Iron. This 7-unit gas booster plant is at Kettleman Hills, Calif. For this work, where corrosive gas conditions are unusually severe, "Ni-Resist" is specified for compressor cylinder liners.

● A basic reason for the increasing use of cast irons alloyed with Nickel comes from the stabilizing power Nickel gives.

It takes but a small percentage of Nickel to level off irregularities in cast iron compositions. No "hard spots", porosity, etc. are encountered in properly alloyed Nickel Cast Irons—they are uniform throughout uneven sections, machine without difficulty and are consistent in structure heat after heat.

Petroleum refining demands a balance of properties: toughness, wear resistance, stability under heat . . . very often corrosion resistance. Different formulas of Nickel, sometimes with other alloying elements, are daily giving proof that alloyed cast iron can meet all these demands. Let the Inco engineers' wide experience help *you* get the right composition for your particular job.

● A balanced combination of density, adequate strength, pressure-tightness and machinability was a requirement of these refinery castings made for use in the Standard Oil Company's new refinery in British Columbia. These requirements were all met to the engineers' high satisfaction by using a cast iron with 1.25% Nickel. The castings shown include Floating Heads, 8" and 22" Channels, and Shell Covers, part of a lot of 30; total weight 6,800 pounds. Produced by The Robert Mitchell Co., Montreal, for the Montreal Locomotive Works.

THE INTERNATIONAL NICKEL COMPANY, INC.
67 WALL STREET, NEW YORK, N. Y.